

898

TGCTGTGGCA	AATTTTTCAT	AGTCGACTTG	CCAATCCAGA	CCAATACCA	CGTAGGCAGG	1800
TTTTTCCCTTG	TCCTTCACAT	AACAGCCCG	CTTGATGGCT	TCCTTGAGTC	CTGCTTCTCC	1860
GACGACATAG	ACGCTCTTTT	CAAGCCCCAA	ATCATTCATA	TAGTCGATGG	TTGCCAAAGT	1920
CGCTGTGTAG	ACAATCGATA	GGGGCGTATC	GATATTAAAA	TTCTGAGCCA	ACATCTCTCT	1980
AACACTCTCT	GGAGTCCGG	TTGTATTTGT	GGTTACAAAG	AGATAGGGAA	TGTCCCGCTT	2040
TTGCAATTCA	TGAACAAAAG	TCCTCTCCAG	AGGATTCGG	TCCTTCCCTT	TATAAATGCT	2100
TCGGTCTAAA	TCAATTAAAT	AGCCTTTATA	TTTCATCTAT	TTCTCCCTAA	GCCTTTTTTA	2160
TTTCTTGCCA	AGTAATGATT	GCCTGGGCAT	TGATAACCCC	ATCACTTGTA	ATTTCATGCT	2220
TGCTTTCCAG	TCGAGTCCGT	TCAACAGCCG	ATGTAATCAC	CCCACTTGGT	CGAACTTCCT	2280
TGACATACTT	GAGGTTGATT	TTCTTGGGAA	TATAGTGGGT	CAAAAAATCC	GCTCCCATGA	2340
CCTCAAAAAA	CCAGTCCAAAG	TATTTACTGT	TATTTGACATG	ACCATTCATA	TCCAAAGTCG	2400
AAAAACGAAC	ATGGTAATCC	TTGCTGATCG	GTCTTCCAA	GGACTCATAC	TTGCGTCCAC	2460
GGATAAGTTT	TTTATCAAAA	TCAGACTGCT	AAGGAGCCAC	AACTCTAGGT	TCAACAACAT	2520
GGACTTTTCG	ACTGTCCCGG	TCCATGAGAA	CAAGGTCGC	CATCATGTGG	ATGAGCTCCT	2580
GCTCCGCTTC	ATTATAAATA	GTAAAGCGAC	GGTAGCAAAA	AGTCTGATTG	TAGCTCAAGG	2640
CTTCGCTTTC	GATGGTAATT	TCCTCCGCAA	AACGAGGCCA	ACGAACCACC	TCAATATCAT	2700
ATTCTACGAT	AATCCAGACC	AGATTATATT	CTTCCAAAAT	GGCCTTATCA	CTAACTCCCA	2760
GTTCATTCGA	CTGCATCCCT	GAACCTTGCA	GTGACAGCAA	AATCACATCT	GGAACTTTGA	2820
TATGACCGAT	CATATCAGCC	ATATCAAAAG	GAATTTTCAT	TTTCAITTTGA	TAAGITTAAGC	2880
CCATGATCCT	ACTCCAAAAT	AAATCGTTCT	GCTACAGTAT	CTCCCAAAAA	GAGACTCTCT	2940
TTTGTCTATC	GAACTGGTTC	ACCCCTCAATC	TGCATGAGGC	CTTGTTGAAC	CAAACTCTCTG	3000
ACAATTCTCT	CATAAAGTCC	AGCAAAAGAC	TGTCCAAATT	TTTCTCTAAA	TCGCGCCATG	3060
GAAACCCCGG	ATTCTTTGCG	GAGTCCCAAG	AACATTCTCT	CTTCCATTTG	CTCCTTTTGA	3120
CTCAOGTAT	CTTCTGTAAT	ACAAGCATTG	CCTTCTCCTAA	CCGCACTGAG	ATAATGACGA	3180
ATGGGACCAT	GATTTTATTA	GGTACTCCA	TTGACATAAC	CAGATGCCCC	TGCACCAATA	3240
CCATAGTATT	CAGCATTTGC	CCAGTACATG	AGATTATGAC	GACTTTTCAA	ACCGGTTTTC	3300
GAGAAATTAG	AAATCTCATA	ATGCTCAAAA	CCCGCTCGCT	CCAGCTCTGC	AATGATGTAC	3360
TCAAACTACT	CGCTCTCTAG	TTCTCTCTTA	GGCAGAGGCA	MTTCCACAG	TGCGATCCGG	3420
TTCATTAAGA	CCGTATGGTT	TTCTAAAATC	AAACTATACA	AACTCATGTG	GGGAATATCC	3480
AAATCAAATGG	CTTTAGCCAC	ATTTTCTCTT	ACTTGTCTCA	TGCTCTGACC	AGGCAGAGCA	3540

TAAATCAAAAT CAATGGAGAT ATGTGCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA	3600
TAAATATCTCT TCTCCAAATG ACTGCGCCCA ATCTTTTTC AATCTTATC ATCAAAGGTC	3660
TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTC AAACAGCTAT CTATCCGCA	3720
TCCAAATGCG CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT	3780
TTAGTCAAGC CATTGAGTAA CACCTCCAGT TGGGAGCCG ACAGGGCTGT CGTGTTCCTA	3840
CCACCGATAT AAAGGGTTGA CAACTTTTC ATATCATAG AACGAAATC TTCCAGCAGA	3900
TGCTCTAAAT AGCTGTGAG TGGCTGATT TTGATGAAGA CCTTTGAAA ATCACAATAA	3960
TAACAATCTT GGGTACAAA TGGGATGTC ACATAGGCTG ACCTTGGTTT TTTCTGCATA	4020
GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAT CACCATCCC AGATACATAG	4080
TCCGTCGGA GATGCTGATG GTTTATCTT CTGTATATC AATCACAATC TCTCTGAGT	4140
CATCAAGAGC TTCGGCTTTT TCCTGCCATT GCTCCTGAG ATTATTTAAT TGATTTTTTG	4200
ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAG AAGTATACTG TCCACAGTGA	4260
TTTCACCTGA CTCACCTCT TCTTTTGTT TCAGAACAA ATCTGTAGCC TGCCTCTTAA	4320
CTTCTGTGAG TTTTTCACAG ACTTGCTCT TGGCATACT CGGATCTCT CTCAAAATCAT	4380
CTAGAAAATC TTGAGCCTGA CTGCAAACTT GTTTGCCCTT ATCACTTGT AAAAACAGG	4440
CAAGAGCTGC ACCTGAAACG GTTCTTAAAA GGATTGAGGA TAATTTACC ATAAGGATTC	4500
TCCTTTTTTA TTTTGTGAAA AATTACTTG CAAGACGAG AGCTGACAGA CTTGACCCAG	4560
TCTTGAGTGT TTTTGAACCA GCTGATGAAG CTCTCTTGT CAAGACACG GCATGGTCAT	4620
TGAGGTCTGA AACAGATAGA GATAAATCTG CAACGACCT GAAGAGTGA TCAATCGTAG	4680
CCACCTTGAC ATTGATATCA TCTGCCAAGA CATTGACCTT AGCCAACAAC TCATGGGTGT	4740
GATGCAAGGT CACATCCACA TCTGAAGTCA AGGTTTTAAT CGTCTTTCT GTTTCATCGA	4800
TGACACGACC AAGCTTTTGT ACAGTAATGA TCAGATAGAC CAAAAGACA ATCAAAGCTA	4860
GGGCAACAG AATATATGCA ACTTCTAACA TTATAGTTTC CTCTCTGTA ATATAGTAA	4920
GGGCTTCTT TCGATTTTGA TAAATAACGA TCATTATACC GAGACGATA AGGACAACTG	4980
ACAGCCATTG GGACACTCGA AAGCCGAGA ACATGAGACT ATCTGTTCCG ATACCTTCGA	5040
TAAACATACG ACCGAAACCA TACCAATCA AGTAAAGGC CGTGATATGA CCTGCTCTGA	5100
GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAA GCCAAGCAGA TTCCATAGAG	5160
ACTCATAAAG GAAAGTCGGT TGACGGTAG TCCCTCAAT ATACATCTGG TCACGGATAA	5220
AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAGAAAT	5280

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TACCCCAAG CCCAAACTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAA	5340
CCCAAGTATT GATGAGTTTA CGGTACGCAA AGATATAGAG CACAAGAGCC CCAGTTATCA	5400
AACCAACGTA AATGGCCAAA CCACCATTCG AAATGGCAA AATCTCTCTT AAATCTCTGAC	5460
TATAGTAATC AATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAANTA GCCAAGGGAA	5520
AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTCTTTTCTA GGTGCTTCTT	5580
TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTACAAAT ACATAAGGCA TACCAACGAA	5640
TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTGCAAGC	5700
ATTAGACTTG TCACTCGTTC GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCTTGGCA	5760
CGATAAATCA TGGCAGCTGC CTCATCACA ACAGAGATAT TACGACCTGT TTTAACTGGA	5820
ATACGAATAC GAGGAATGTA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGAGC	5880
ATCAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CTTGTGAAGA	5940
ATCCTTGACA GCACCTCGAC CGTAGAGACT CATAACATCG ATAATACCAA CCCACGAAT	6000
TTCAATCAAG TGTTTCAAAA TTTCAGCTGG TTCACCCAG AGAGTAATCT CATCCTTGGC	6060
AAAGATATCG ACACGGTCAT CGGTACCAA ACGGTGACCA CGTTGACAA GCTCAAGACC	6120
TGTCCTGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC	6180
CATCAA	6186

(2) INFORMATION FOR SEQ ID NO: 132:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9541 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

GAAATCACA ACCCTTTTTG CAAAATTTT GAGATTATTT TCACAACTT GATTTTTCAA	60
AGTATACTCA ATAAAAATTA AAAAAATCCA CTCATCAAG GCGAGGCTAA TGTGTTTGA	120
AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATAGTA AAATAAAAA ACTGAACAAT	180
TTGGTTGGGG ACAGCCAAAC CAATTCTCTA CAATGTTCA GAAACAAGGG TGTGCTATTC	240
CAATTTCAAG CTACTATAAC TGTCAATAGT TGCTGAJACA AAGTCTAGGT AAAAGTCTTC	300
ATAATAAAAA GACCTCTTAT CAAGTGTCA AAAACTTTGA TAGGAGGTCT TGTTTTGTGA	360
AAATATTATT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCTTTCA	420
ATTTCAATGA ATGGATTITT TACTAATACT CATAACTGG AATTGCTGCT TGTAATAATA	480

GCGAGATAGA	TGGTATTAT	AAAACACTCA	AGACAGCTAG	ACTAATATCA	TTTAAACAT	540
TATCTTCTTC	TGAGCGACTG	TTGGTTACCA	ACATAGCTAA	ATTCTCTGCA	TTTTCAAAT	600
GATAGGGTTC	TGATTTAGCA	TTCAACACCA	CCAAGAGGTG	TTCTTTGCCG	TGAACATCAT	660
AGATAAGGTA	GCCGCTATGT	TCAATCGCAG	AATGCACAAA	GACATGATGG	TAAATTTTCAT	720
CATAGCTAGA	GTAAGAAAAG	GCACGAGTTT	TTGTCTTCAA	TCGGATGACT	TGACGGATAA	780
ACTCAATACT	GTCTTGACGC	TCAATTAATCA	AGTTCCAGTT	CACCTGGTTC	ACACTGTCAG	840
GAGCATTATA	GCTATTTCATC	GCACGCTCTC	TATCATCATG	GGTCAACTCA	CCATTTTCAC	900
CAGTCGCAC	CAGTTTGGTA	CGACCAAAAT	CTTGACCGAT	TTCATATAAG	GCCATCCCTT	960
GATGAGCAG	ATTATGGCT	GTGGCAGTTT	CGACCTTGGC	CATGATTTCG	TCGAACTTT	1020
GGTCTGGATG	AAGGGTTGCC	AATAAATCGT	GAAGATTGTA	ATTGTCATGG	GCTCTACAT	1080
AGTTAAGCAC	CTGATTGGGA	TGTGTATAGC	TTCTTAATTC	ACGACTTCCT	ACGATTGCTT	1140
TAGCTAGAA	TGGCTCTGTC	GCAGCACCAC	TGACAAAACC	TGACTTGATA	GCACCATAAA	1200
CTTCTCCCC	TTTGACAGCA	TGCGCTGAT	TGTCATTAAA	GAAACCAATA	TTTGGCATCT	1260
GGTAGGCATT	GTCTTCTTTG	GCCTTATCAT	AAGGGGCAAG	ACCTGTTCCT	ATATCCCATC	1320
CTTCTCCATA	GAGGATAATG	TTGGAGTCGA	TTTCATCCAA	GCTTTGACGA	ATCATCTGCA	1380
TGGTCTGCA	ATCATGAATC	CCCATCAAGT	CAAAACGGAA	GCCGTCAATA	TTATATTCTT	1440
GCACCCAGTA	TAGAAGAGAA	TCAATCATAT	ACTTGCAGAA	CATTTCGTGT	TCACTGGCTG	1500
TTTCATTTC	AACACCCGTT	CCATTCTGGA	AGGTACCATC	TGGATTTCATA	CGATAATAGT	1560
AATCAGGAC	TGTTGTTTGG	AATGGTGATC	CAACAACCTGA	GAAGGTATGG	TTATAGACTA	1620
CATCCATAAT	GACTCCAAAT	CCCGCATCGT	GATAAGCTTG	AACCATCACC	TTCAAAATCAC	1680
GAATGACCTG	AGCTGGATCA	TCTGGATTAG	TTGAAAAACT	AGTTTCTGGC	GCGTTATAGT	1740
TTTGTGGATC	ATAACCCAG	TTGTAGGTTA	CATTTCATC	CTCATCGTAT	TCPTTATCAC	1800
GCTCTGCAAT	TGGTTGCAAT	TGACATAAAT	TGTAAGCCAG	CTTCTTGATG	TAATCAAAAAG	1860
CAGTTGACTG	GCCGTATTGG	TTAAGTGTC	CAGCCTGAGC	AGCACCAAG	AAAGTTCTTC	1920
GAAGATGTTT	ATCTACACCC	GATGTAGGTG	ATTTAGTCAA	ATCACGAATG	TGCATTTTAC	1980
AGATAACTGC	CTTACATGGA	TTTTCCAAGC	GCCAAGTAGC	CTCCGAACCG	TGCTTAACCT	2040
CGAAGTTTTC	AACCTGCTTT	TCTACATGGC	TCAGATATAGC	TGAACGTTTG	CCATCAGGGC	2100
TGGTCGCGAT	TGTATAAGGA	TCAAGTGTCA	GTGTTTGGTG	ATGAGGGAA	TGGAATTCAT	2160
ACTGATAACT	CTTACCTACC	AAATCTTCTT	CAACATCCAA	ACTCCAGACA	CCGATTGTAT	2220

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TGTCCTTATG	ATTATAAGAG	TAGCTATTGC	CTCTTTTCAT
GTGCAATCAT	AGCAGCTGAT	TCAATAACGA	CAACTTGCAC
AGAGAGAAAA	ATGAGCCTGA	TGTCTCTCTA	CACGGCAACC
AAATGATGATC	AAAACTAGCA	CTGTTAATGG	CCTTATCAAA
TATAGAAAGG	ACTGGCAATA	GCRGGATTTT	CAGAGTAATA
AAATCCAGAC	CTCTGTTAAT	AGGGGATAGT	GATTAAAAAG
TTTGACCTGT	ATGAACCAACA	AAATCAAGC	TTTCTATAAC
AGCTAAATAA	AGCTCCAAAA	TAACTCTCTT	TGTAGGTTAG
GACTTTTTAC	AAAGGAGCAA	GTGTCATATT	CTCCATTCTT
TAGGCTAGTT	ATACATTTTT	TATTTTTCCT	TTTTCATTGG
TTTGTCAAT	CTCGTCTCAA	TAAACAGACA	TAGTCATATT
CGATCCATTA	CAAACTTTCT	AGCCATGCCT	CATCTCTGAC
CTTTTTCGAC	TTTACTTTCCA	CGCTCTGCAC	CTACCAAGAC
TACTACCTGT	CACITTTGCA	CCCAGACTTT	CGAGTTTACT
GTGCTTCCAA	TTTTCTCTGC	AATACCAAGG	TCAAACTGTA
CGCTCTGTC	TTTATAGTCC	AGATTGACCC	CAGTTTCTTT
CAGAGCCTTC	TGTCGCAAAA	TAAGTCTGAA	GACTTTTGGC
CAATACTAGC	CACITCTCTCT	GAATCTGCCT	GAGACAGATT
GAAGTAAAG	CTGACTTAAC	TTGCTTCCGA	CATGACGAAT
TCTCGGCAGA	ATTTTCTCTT	GATGCTTGGA	TAGCCTGATA
CCTTAATCTCC	CTCTAAAAAG	AGGAAATCCT	CTTCTTGCAA
CCTTGACTAA	ATTAGCAGCA	AAAAGCTTCT	CAACAATAGA
TCATAGCATC	ACGAGAAACA	AAGTGAATCA	AGCCTTCCAT
GATTGATACA	ACGTAGGGCC	ACTTCATCTT	CAAACTGCAA
GACAGTTTGT	AGGGATATCT	AGTTTTTCTT	CAGAAACCCG
AAACGGCAGG	GATGATGTCA	CCAGCCTTAT	AFACAATGAC
CTTTTTTCAGC	AATATAATCT	ACATTGTGCA	GCGTCGCACG
GTGTGACTGG	TGTTAGATTA	GCAGTTGGAG	TTACAACACC
CAACTGATAA	GAGTTGAGCT	TCTTTTTCTT	CGGCAGGGAA
TTGAGGCCTT	AACGTAAAAA	CCAAGTCTTT	CTTGACTTGC

2280  
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3600  
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3720  
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3900  
3960  
4020

CCACTCCATC	AAATACGFAA	GGCAGATTTT	CCCGTCCCTG	TCTTACTTCT	TGGATAAAAT	4080
TCCAGATTTT	ATCTATGTTT	TCAGCCAAAG	TTGGCTTAGG	ATTGACCACA	AAACCTAGTT	4140
GTCTTAGGTA	CTTCAAAACC	TTTTCTGGC	TATCACAGAT	TGAAGGCGTG	GCTTCTTGAT	4200
AGAGAAACGT	TGCAAGATTA	CGCTTGGCAA	CTACTGCTGT	ATCCAACGTA	CGCAGAGTTC	4260
CTGCTGCCGC	ATTACGAGGA	TTAGCAAAAT	CAGGCTCTCC	ATTTTCTTGG	CGCGCTTGGT	4320
TAACCTGGTC	AAAGGAAGCG	CGTGGCATGT	AACATTCCTC	ACGAACTGTG	ATATCTAGTT	4380
CTTCTGGCAA	AGTCAAAGGG	ATGTCTTAA	CACGCTTGAG	GTTTTCTGTG	ATATTTTCAC	4440
CAATTGAACC	ATCTCCACGT	GTACCCCGAC	CAACCAAAAT	CCCCTTTCA	TAAGTCAGCG	4500
AGATAGATAA	GCCATGCGAT	TTGAGCTCAC	AAATATAGGT	CGGATGAGCC	ACTTCTTTAC	4560
GAACACGCGC	ATCAAAAGCA	TCTAGTCTCT	CACATGAAAA	AGCATCCTGC	AAACTATAAA	4620
GAGGATAGTG	ATGACTGTAT	TTTTCAAAAC	CATCTAAAAC	CTTGCCACCA	ACACGATGAG	4680
TCCGACTGTG	TGCTAGCACT	TGCTCTGGAT	AAGCAGTTTC	TAACTCGACC	AACTCACGGT	4740
AAAGGCGGTC	ATACTCACTG	TCTGAAACCG	AGGGATTATC	GCTGTATAG	TACTCACTCG	4800
CATAGCGATT	GAGCAAGCG	ACTAACTCAT	TCATTCTTTT	ATTCTATAAG	CCATTTTACC	4860
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TAAGAAATAT	AAGGCTACAA	CTCCAAGTCC	AAATATCAAG	AAAGAAATAA	GATGGACACT	5040
TGGCAAGACT	GTCTAAATC	CTTTTGCAT	AGGCATAAAT	AGAAATAGTA	AGGTAAAAAT	5100
TGTACTCAGT	ACTCTTCCAA	GAAATTCGCT	CTCAACCTTG	GTTTGTACTT	GAGTAAAAAA	5160
GTGAATATTA	AAAACTGCTA	TAAACAATTC	ACAAACTAAA	TTTTCCAGAA	AGGAAGAAAA	5220
AGTTGGAAAT	GGTAATCCCA	TCATAAAAAA	TCCGACACCT	GTCAAGGCCA	GTAAATTCAA	5280
AAGATTATAA	ATATTAGCTT	TAATTTTACT	AGCTAGAAGA	GCCCCAATGA	TGGAACCAAT	5340
AGCCCCCATA	GTAAATATAC	TTGCATAGGC	TCCTTCTGAC	CCGTAAAGCT	GATTTCGAAA	5400
GGGAAGTAGA	AATTCAAAAG	CTGCAAAAAA	GAATTTAACG	CTGGAAAGCTA	CCAGCAAAAG	5460
GAAGAAAATT	TCTTGCTGAT	GCCAGATATA	GTGTAACCCA	TCCTTGATAT	CTACAAAAAT	5520
ATCTCTCCCA	GTAAAGCGCT	TTTTCTCTTG	AACTTTTGCT	TCCTCTTTTG	GAAGGAAAGC	5580
CACTAGAACA	AAAGCAATGA	AAAAAGCTAG	CGAGTCTAGC	AGTAGCGTCA	TATGAGAGCT	5640
TGCAAACTGT	AAAAACAAGGA	AGGAAAGAAC	AGGAGAGCTA	ACACCTACAA	CCTGCAAAAC	5700
CACCTCTAAG	CGAGAATTAT	AGATCACAAAT	CTCATCTTTC	TCCACCACCT	CAGTTATGAT	5760

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AGCTTTATTG	GCTGTGCGAG	AAAAGGCCAA	AGCAATAGCC
5820	TGCACAATGT	TAGCAACAA	
CAAAGCGCCA	ATCATCCAGC	TATCATTCCT	TATGAAAGAA
5880	ATAGCCAGAC	AAAGAATCCC	
ACAAACAAGA	TCTGCCCTCA	TTAAATCTT	ACGACGAGAA
5940	AAACGGTCTG	AAATACTCC	
GCCAAAGGGA	TTGACGAGAA	TAGATGTGAC	GAGCTCAGAA
6000	ATCTGATACA	TTCTTAAAG	
TGCTGTGCTT	ATAGTCCCCA	TAGAAGCCAA	CCAGACACTA
6060	TTTCCATAAT	CATGAGCAT	
ATTGCCCAT	TTATTGATAG	CCCCACGGCT	AATCAACTGC
6120	ACTGCAATAG	GATTCATATT	
AAAGCTCCTC	TCAAATTTTG	AAACTATTGT	ATCAAAACCG
6180	AAAGGAGCTT	TTTATTTTTT	
CCCTTATTTG	GGAAAATPAA	CTTTTGACAA	ATTTTTTCGA
6240	GTGTTCCTGA	TAAATAGGCTA	
CTTGTCTGTG	AAGACCTAAC	ACATCAAAAA	TATGCATGGC
6300	CTCTTGCATC	TGCTTACAGC	
CTTCTTTACA	CTGTCCPTTT	TGATATAAGG	CAAAACCTTT
6360	TAAATAATGG	AAAACATPAC	
GCTCATTAAG	CTTAAATACCT	TTTGCAATAA	TCCTCTCTGT
6420	ATAAGCTCCA	AAATAGTTGG	
CATATPAAAA	AGAAGATGCG	TCTPAAACAA	GCTGGTAACA
6480	ATTTAGGGCC	AAAATCAACA	
CTAATCTCTT	ATGGCGACTA	ATCTCTTGGT	AAAATTCCTC
6540	CCTCTCCATA	ACTTCTCTAC	
CAATCCGAGT	GACATAGTCT	ACATCGTAGA	AACTATAGAG
6600	GTACCGAAA	AGAATCAACT	
CATACATGGT	CCATPCTTCT	GTPTTGAAGA	GATTAATCTGC
6660	TACCTTACCC	AAATCATCCT	
GCTTCATATC	ATAACTCGCA	TCTCTTTGAC	AAATCAGACC
6720	TTGTAGCAAA	ATCCAGTTCA	
GCTCAAAATA	AAGGGGAGTC	GTGGAATCTCT	TAGACTTTTC
6780	AAGTTTCTCT	CTTTGAAGCT	
TTTGAAGAAC	TGCAATATCG	TTTGAATAGT	AAAGTGGGAT
6840	AATCTGTGCC	ATCATAGACA	
CATGTTCTATG	ATTATGAAAA	TTCTCTGCTT	TATCCATGAA
6900	ATTTTCGATT	GTTCATATGAA	
TGTATCCAAA	AAATCTCAAG	AAACGGGAGA	CTGCCAAGTC
6960	AGACTCCCCA	AGCTCAAGGC	
GAGATAACTG	AGAGGTAGAG	CAGGATTCGC	CTGCTGCTTC
7020	CTTTAAAGAA	TAATTTCCAC	
TTGTTGGAAG	TTCAAGAAAT	ACTTTTCCAA	GATGTTCCTT
7080	CTTTACACCT	GCTCTGATAA	
TTCTTCCAC	TCAAGCATAG	CTTCTTCTTG	ACGATGGCTG
7140	ATTTTGTCCA	GCTCAGCCTG	
TAATTCATG	AGTTTGTGCG	CATCGTTTGT	TTCCAACATT
7200	TGTCAGAAA	TGGCTTGGCT	
TTGACTTTCT	AGCTCTTCAA	TTTCAGCTTC	TAGACTTTTC
7260	ATTTGTGCGA	TGAGTTTGG	
AACCTCTTTT	TGACTTTCTT	TCTGGGCTTG	ATAGTCAATG
7320	ACTGGACTTG	CTTCCCTTGC	
TGTATTCATA	GTGGAAGCTT	CCTCAGTCTG	ACTCATTTCT
7380	GCTGTGCTTT	TCTTCTCAAC	
ATAGTAGTCG	TAATCTCCAA	GGTAGAGAGT	TGAACCATTC
7440	TCAGACAATT	CCAAAACATG	
AGTTGCCACA	CGATTGATAA	AGTAACGATC	ATGACTTGACA
7500	AACAGCAAGG	TTCCATCAAA	
GTCAATCAAG	GCATTTTCTA	GCACTTCCTT	ACTATCAATA
7560	TCCAAGTGGT	TGCTCGGCTC	

ATCCAGAAAT AAAAAGTTAT TGTTTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT 7620  
 TTCGCCACCA GATAGCATGC CGACTGATTT TTTAACAATCA TCTCTGAGA AAAGGAAGGC 7680  
 TCCAAAGACGG TTGCGGATTT CAACCTCTGG TGTTCAGTTG AAATCATTCG AGAGTTCATC 7740  
 CAGCACGTA TTACTTGGTG TCAGCTTGCT TTGGTTTGG TCAATAGAAC CAACCTCAAC 7800  
 ATTAGCGCCA AAGCGCTTTT CTCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT 7860  
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 GCCAGCTTCA GGCTTGTTCCA AACGTTCCAT TTTTTCAGT TGTTCACGGC GAGATTGAGC 8100  
 ACGTTTAGTC GTTGAAGCAC GAACCTAGAT GCGATTGACA AAGTCTTCCA GAGCAGCGAT 8160  
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 GACAAAACGA GAGTAATTTC CCACATAGGG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT 8280  
 AATTGTGCA ACCTTGTTCCA AGAAATAACG GTGCTGGCTG ACGATAATGA GGGCACCGCT 8340  
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 CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAACCGAGT 8460  
 ATTTTGACCA TCAGAAAGCT CAGCAATTTT CATCTGCCAC ATAGACTCGT CAAACTTGAA 8520  
 TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GCGGAAAATT 8580  
 CTCAGATAAG CGGTATAAT CTGACATCAG TTTATCCAAA TCCTCACCAG ACTTTTCACC 8640  
 CATCTCCAGC TCCATCTGAC GCAGTTGTCT CTCGTCGGA CGCAAATCAT TAAAGACATG 8700  
 AAGCATTTCA TCGTAGATGG TATTTTCAGA CTCAAAACGG CTATCTTGGG CTAGGTAAAG 8760  
 CAGAGAAATA TCTTTTTTCT TATTGATTTC TCCGCTAGTT GGCTCCTCTT CTCCAACTAA 8820  
 AATCTTCAAA AGAGTAGACT TACCTGCACC ATTTTTCOCA ACAAGAGCAA TCGGATCTCG 8880  
 TTCACTAACC TGCAAGTTGA TATTATCGAA AAGAACCTCT CTCGCAAAAG AAGCTTCAAT 8940  
 TTTATTAGCT TGTAATAATA TCATACAAGT AGTATAGCAT GTTTCCTTAA GGCATTCAAG 9000  
 ATAATCGTAA GTCTTTTGTG ACAACTTTTA TAACAATAAA TAAACTAAAT TATGTATATT 9060  
 TTATATTAGA TTACTTCACT ATCTGTGTGG ATTTTCTAAC CAGCTAATCT TGTTTCAAAAT 9120  
 AGTTATCGCA CAAGTCTATT ATTTAATTCT TTTCATCATT TACGTACGTA TAGCAGATTG 9180  
 AAATAACATG AGAACAACAT GATTGGGAAA GTAAAATTAA TTTCTATAAA TGTTTPIAGCA 9240  
 ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT 9300



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TTTAACTCT ATTATTACT AGATTTCATA ATTA AAAAC CTACTGACCA AGCTAGAAG	9360
CTTGATACAA TAGGCTTTT AAAGACTGAT TATTAAACAG CGTCTTTAAG AGCTTTACCA	9420
GCTTTGAATG CTGGTACTTT AGAAGCTGCA ATTGTCATT CTTTACCACT TTGTGGGTG	9480
CGACCTTTAC GTTCTGCGCG CTCACGAAC TCAAACTTAC CAAAACCGAT CAATTGAAC	9540
T	9541

## (2) INFORMATION FOR SEQ ID NO: 133:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3502 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

TTGACTATCC TATCATGCTT TCTAAGTCT ACTCAAGAAA ATCATTTTCA AGTTTTCACA	60
CCTTTCTCAA AAAGTTAAA AAATTTTCTC AAAAACGCTT GACTCTGACC TAAGGCGAAG	120
GGTTATACTA TCA TTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT	180
CAGGTGTCTC TGTCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCCTTAA	240
AGTCGGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATT GGAACGCTT CAGGTCATT	300
TTTACTACAA ATATCTAGGC TTTCTTTAG AGAAAAATGC AGAGCTGTTA AAGGAAGAAA	360
GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC	420
ATCTGGATAC CTTGATTTCC ACCTTGCAAA AACTATTCA AGAACAAAA GGAGAAAGAA	480
AAATGACCAT TGAGGAAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC	540
AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG	600
GTCAAGAA GAAGGCTACG GCCGCTTTA ACCAAGTCTT TCAAACTTTG GCACAAAATC	660
TTCAAGTTGG TTACCTGCA ACAGCAACCG AAAACCAGGA GCAAGCAGCC AAGCTCTTGC	720
AAGCCATTGC CACTTATGGA TTGACTGCT CTATTGAAGT ATTCTGGTAT ATCGGTAAG	780
GTTCAGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTTCT GAAACAGCCC	840
AGTACAGCTC AGATGCCATT GCGGTTTACG TTCAGACAAA TGCAGATAA ATAGGCTAGG	900
AATTTCTAG CCTATTTTTT ACTTCAAAAT ATAAAGCCAG TCGTCAACGT TTTGTAGTA	960
AAAGAATTCA CTGAGATCTT CTTCTAGAAA CACACGAAGC ATATCAGACA TATCATCGGT	1020
TGCAAGTTTT AGATGAGAAA GATTTTCAA GTCTCCAC CAAACTTTCC CTTCTCTGA	1080
AGCTGGAGT TCACCAAGTA AGTGTCTGT CTTTAAAAA AGGACGACAT AACGATAATC	1140

CTGTGCTCA	TACCACTTTT	TGATACCACA	GAGTTGGGTT	TTGGAAATGA	TCAGACCAGT	1200
TTCTTCTTTC	ACTTCAAGAA	TGACAGCATC	GACAAAGGAT	TCGCCACGTT	CAACATGACC	1260
ACCAGGAAAA	GTAATGCCAG	ACCAGTCGGG	ATTAACTCGG	TCTTTGACCA	GGACCTTATC	1320
TCCGTTTFTA	ATCATACACA	TGTTAAACAA	TTTGACTGCC	TCTCTTCTGT	TCATTCCTCA	1380
CAACCTTTAA	TCTTTAATCA	TAATGCAGAC	TTCCCGCCAC	CCAGCCGGTA	CAGAGGCGAG	1440
AAGTGATGTT	AAAGCCACCC	GTGTGGGCAT	TGATATCCAT	AACTTCGCCT	GCAAAGTGA	1500
GGCCAGGTAC	CAGCTTACTT	TCAAGGGTTT	TAGGATTGAT	TTCTTTGAGA	CTGACTCCAC	1560
CCTTGGTAAC	AAAGGACTTT	GCAAGGACA	TTTTTCCAGT	TACAGGAATT	TTAAGTTCTT	1620
TAATGGACTG	GACAAGTTGT	TCTCGTTCC	TTTCACTCAG	TTCTTTGACT	TTTTCAGGAT	1680
ATCCTTTGTAC	AAAAAATTCG	GCCAAGCGTT	CTGGTAACAA	GGTTTTTAAA	CGGTTTTTCA	1740
AGGATTTTTC	CGATTTTTCT	TCTAGAAATG	TAACCAAGTC	CTTCTCAGAA	AGTTGAAGCA	1800
AACATCGAG	TGAGAGAAC	TCCCCACCTT	TGACAAAGCT	AGACATGCCT	AGGGCAGCAG	1860
GACCTGCACA	ACCAAGTGG	GTAAGAGATA	AATCATGAGT	GATGACATGC	TTACCATAAC	1920
TTAGGGTCAC	ATCGTCCAGA	GAJATACCTT	GTAAGGCTTT	ATGTGGAAAA	TCTGTTAATA	1980
AAGGACTTTC	AGCAGCCCTA	AGATCGGTGA	TGGTATGCTT	AAAATGGCGA	GCAATCTCGT	2040
GACCAAAACC	AGTCGAACCA	GTCGAAGGAT	AAGACTTACC	ACCTGTTGTG	ACAATGAGTT	2100
TCTCACAAGT	GAAGGTTTGA	TCCGCTGACT	TAAGGACAAA	CTGGTCATCT	ACTTTTTTAA	2160
CAGAAACGAT	TTCTATTTGA	GTAAGCACTT	GACCACTTAG	TTCCGTTGAT	TTCTTTTCCA	2220
AAGCTTCGAT	AATAGTCCGA	GACTTGTAC	TGGCTGGAAA	GACCGTCCG	TGGTCTTCGA	2280
CCTTAAGTTT	AACACATT	TCTGTAAAAA	AGTTGATGAT	GTCATGATTA	TCGAACTGGG	2340
AGAAAACACT	GTAAGAAG	CGTCCGTTTC	CAGGAATTCC	AGCTAGCAGG	TTGTCTAAGC	2400
TACCATTTGT	GGTCACATTG	CAACGTCCCC	CACCACTCCC	AGCTAATTTT	TTTCCAAGTT	2460
TCCGATTTT	TTGATGAGG	AGGGTTTTCT	GTCCATAAAA	GCTACTGGAA	ATCGTAGCCA	2520
TCATACCAGC	AGGTCCOCCA	CGATGACAA	TAGTATCAA	ATGTTTCATA	GCTCTATTGT	2580
ACCACAAAAA	AACAAGAGAT	GATGGTCACC	TCTTGTCAAG	AATGCAATTA	ATCAATTTCA	2640
TAGCCCATCA	GCAACCGCC	CTCTTCTGCA	TAGAACTGC	AGAGACCAGA	GGTTCGTAGA	2700
ATTTTAAAT	CGCTTTGGG	GAAGGTTTCA	CGGATTCGCT	CTGAGAGCTG	TTGACAACAT	2760
TTTTTCGTTT	TGCGTTGGG	CATGACAATA	CGGCCACCAG	CATATCCAGC	TTTTACTAAC	2820
TCATCATAGG	CAGCTTGAAC	TGATTTCTTT	GATCCCTTGT	CTTTTGTGAG	CAATTCGAGA	2880

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GTCCAGTTT CACTAGCTTT TCGACCATA CGAATGTGA GAGGCCAAC GACCOTACCG	2940
ATAAGCTTGC TCAACGGCC GTTCTTCACC AAGTTATCGA CTTTGGCTAG GACAAAGAGC	3000
AACCTAGTTT TTCTTTGATA GCGGGTGATA GCTTCAACCA CTTCCTCAAA AGACAAGCCC	3060
TGGTCAATCA AGTCATTCAA TTTTCTACG AGTAGGTCAA CTTTACCACC AGCAGATAAA	3120
CTATCAATCA CATGAATCTT AGTGTACGGA TGGTCTTCCA GATAAATATT CTTTGTAGT	3180
TGAGCACTAT TGTGACTGCC AGAAAGGGTA CCTGTGATGG TTACTAGGAA AATGTTTTTG	3240
GCACCTTCAA ATGCTGCGAA ATAGTCATCT GGGCTTGGAC AAGCCGATTT TGAAGCTTCT	3300
GCAGTTGCAT ACATGGTTTC CATCATTTGG TCANTATCGA GACTGGCGTC ATCAACAAAG	3360
ACCTGATCAG CTACTGAAT GGTTAAGGGG ACACTTACAA AGGTTGTCTT AATAGCTGGT	3420
GTTGGCAGTT GACGATAATC ACAACCAGAG TCAGCAATAA TCTTCCAAGT CATAGAAATT	3480
CTCCATCTTT GTCAGGAACG AT	3502

## (2) INFORMATION FOR SEQ ID NO: 134:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12665 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

CGATTGATTT TTTTAAAGCG TTCGATAGAG AATGAGAAAC GAATCCTTAG CAATGGGCGG	60
AAAGAATTTG GAGTTGAGAA TACAAAACGA TTAATCTATGG CTCATATTGT TTTTATCTC	120
TCTTCTCTGG TTGAGGCAAT GGTGCACAG ACAATTTTGG ATGGCATGGG CATGGTTGGT	180
TTAGTCTTGC TTATTTTTTC TATGCTGATG TTGATGTTGG TGATTCACCT GTTGGGAGAT	240
ATTTGGACAG TGAAGCTTAT GCTTGTCAAT AATCACAAT ATGTAGATCA TATCTTGTTT	300
AGGACAGTAA AACACCTTAA TTACTTTTTA AATATTCTTC CTGAGTTGAT TGGCTTGACC	360
TTGTTGAGTC ATGCTTATGT GACTTTTGTT TTAGTTTTTC CAGTTTATGC ACTTATTTTG	420
TATCGACGAA TAGCTGAAGA GAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC	480
ATAAAGAGAT AATATACAAA TTGCATTTAT ATACAGTTCA TATTGAAGTG ATATAGTAAG	540
GTTAAGAAA AATATATGAA GGAATATAAC ATGTTTGCAAT CAAAAAGCGA AAGAAAAGTA	600
CATTATTCAA TTCTGTAAT TATGTTTGGG GTAGCTAGTG TAGTTTGTGC CAGTCTTGTT	660
ATGGGAAGTG TGGTTTATGC GACAGAGAAC GAGGAGAGTA CCCAAGTACC CACTTCTTCT	720
AATAGGGCAA ATGAAAGTCA GGCAGAACAA GGAGACACAC CTAaaaaact CGATTCAGAA	780

CGAGATAAGG CAAGGAAAAG GGTCTGAGGAA TATGTAAAAA AAATAGTGGG TGAGAGCTAT	840
GCAAAATCAA CTAAAAAGCG ACATACAAAT ACTGTAGCTC TAGTTAACGA GTTGAACAAC	900
ATTAAAGAAC AGTATTTGAA TAAAAAGTT GAATCAACCT CAGAAAGCCA ACTACAGATA	960
CTGATGATGG AGAGTCGATC AAAAGTAGAT GAAGCTGTGT CTAAAGTTTGA AAAGGACCTCA	1020
TCTTCTTCGT CAGGTTTCTG CTCTTCCACT AAACCGGAAG CTTCAGATAC AGCGAAGCCA	1080
AACAAGCCGA CAGAACCAGG AGAAAAAGTA GCAGAAGCTA AGAAGAAGGT TGAAGAAGCT	1140
GAGAAAAAG CCAAGGATCA AAAAGAAGA GATGTCGTGA ACTACCCAAC CATTACTTAC	1200
AAAAAGCTTG AACTTGAAAT TGCTGAGTCC GATGTGGAAG TTAAAAAGC GGAGCTTGAA	1260
CTAGTAAAAA TGAAGCTAA CGAACCTCGA GACTAGCAAA AAATTAAACA AGCAGAAGCG	1320
GAAGTTGAGA GTAAACAAGC TGAGGCTACA AGGTTAAAAA AAATCAAGAC AGATCGTGAA	1380
GAAGCAGAAG AAGAAGCTAA ACGAAGAGCA GATGCTAAAG AGCAAGGTAA ACCAAAGGGG	1440
CGGGCAAAAC GAGGAGTTCC TGGAGAGCTA GCAACACCTG ATAAAAAGA AAATGATGCG	1500
AAGTCTTCAG ATTCTAGCGT AGGTGAAGAA ACTCTTCCAA GCCCATCCCT GAAACAGAA	1560
AAAAAGTAG CAGAAGCTGA GAAGAAGGTT GAAGAAGCTA AGAAAAAGC CGAGGATCAA	1620
AAAGAAGAAG ATCGCCGTAA CTACCCAAAC AATACTTACA AAACGCTTGA ACTTGAAATT	1680
GCTGAGTCGG ATGTGGAAGT TAAAAAAGCG GAGCTTGAAC TAGTAAAGA GGAAGCTAAG	1740
GAACCTCGAA ACGAGGAAAA AGTTAAGCAA GCAAAAGCGG AAGTTGAGAG TAAAAAGCT	1800
GAGGCTACAA GTTTAGAAA AATCAAGACA GATGCTAAAA AAGCAGAAGA AGAAGCTAAA	1860
CGAAAAGCAG CAGAAGAAGA TAAAGTTAAA GAAAAACGAG CTGAACAACC ACAACGAGCG	1920
CCGGCTCCAA AAGCAGAAAA ACCAGCTCCA GCTCCAAAAC CAGAGAATCC AGCTGAACAA	1980
CCAAAAGCAG AAAAACCCAGC TGATCAACAA GCTGAAGAAG ACTATGCTCG TAGATCAGAA	2040
GAAGAATATA ATCGCTTGAC TCAACAGCAA CCGCCAAAAA CTGAAAAACC AGCACAACCA	2100
TCTACTCCAA AACACGGCTG GAAACAAGAA AACGGTATGT GGTACTTCTA CAATCTGAT	2160
GGTTCATGG CGACAGGATG GCTCCAAAAC AATGGCTCAT GGTACTACCT CAACAGCAAT	2220
GGCGCTATGG CGACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTATCT AAACGCTAAT	2280
GGTTCATGG CAACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTACCT AAACGCTAAT	2340
GGTTCATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2400
GGTTCATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2460
GGTGATATGG CGACAGGTTG GGTGAAGATG GGAGATACCT GTACTATCT TGAAGCATCA	2520

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GGTGTATGA AAGCAAGCCA ATGGTTCAAA GTATCAGATA AATGGTACTA TGTCAATGGC	2580
TCAGGTGCC TTGCAGTCAA CACAACGTGA GATGGCTATG GAGTCAATGC CAATGGTGAA	2640
TGGGTAAACT AAACCTAATA TAACCTAGTT ATACTGACTT CCTGTAGAA CTCTTTAAAG	2700
TATTCCTAC AAATACCATA TCCTTTCAGT AGATAAFATA CCTTGTAGG AAGTTAGAT	2760
TAAAAATAA CTCTGTAACT TCTAGCCGGA TTATATAGCG TAGAGACTAC GGAGTTTTTT	2820
TGATAGGAA AGAATGCCGG CATTCAAGAG GCTCTTTAAG AGAGTTACGG GTTTTAAACT	2880
ATTAAAGCCT CTCCAATTGC AAGAGGGTTT CAATCTCTGC CAGGGTGCTG GCTTCCGAAA	2940
TGGCTCCACG GAGTTTGGCA GCGCCAGATG TTCCACGGAG ATAGTAGGA CCGAGACCGC	3000
GGAATTCACG AACTGCCACG TTTCTCTCTT TGAGGTTAAT CAATCGTTTC AAGTGTTCGT	3060
AGGCGATCTT CATCTTGTCT TCAAAAGTCA AATCAGGTAG GATTCTCCT GTTTCAAAGT	3120
AATGGTTGAT TTGGTTGAAG AGGTAAGGAT TTCCCATGGC AGCTCGGCCA ATCATGACTG	3180
CTCAGACACC AACTTCTTCT ATGCGTTGCT TGGCTCTCTG GACAGTACGG ATATCACCGT	3240
TGGCGATGAA TGGAATCTTG GTTAGAGCTT GGGCAACCTT GTAAAGGGTC TCAAGGTCTG	3300
CGTGCCACGT ATACMTTGT TCACGGGTAC GGCATGCAT GCGAGGGCA GAAACACCTG	3360
CAGCTTCAGC AGCGAGAGCA TTTTCTACTG CAAGAGATGG GTCCGCCAG CCGGTACGCA	3420
TTTTACAGT AAGTGGGATA TCAAGGACAG ACTGGACCTT GTTGATGATG GAGTAAATCT	3480
TGTCTGGATC CTTGAGCCAC ATAGCACGAG CTTCGTTCTT CACGATTTTG TTGACAGGSC	3540
AGCCCATGTT GATATCGAGC ATATCGGTCT TGGTGTTTTT TTGGATGATF TCTGCTCGCC	3600
GTGCTAGGCT GTCTTCATCG CTACCAAAAA GTTGGATAGA GACAGGGTTT TCGCCCTCAT	3660
CGATATGAAG CATGTGACGG GTTTTTTCGT TGTGTATTG GATTCCTTG TCAGAGACCA	3720
TTTCCATTAC AACGATCCA GCTCCGAGCT CCTTTGCGAT AGTACGAAAG GCTGAGTTGG	3780
TCACGCCAGC CATAGGCCGT AAAACGGTAC GATTGGGAAT CTCAATATTG CCAATCATAA	3840
AAGGTGTATT AAGATTTGTC ACGAATGAGT TCCTCCAGGT CCTTTTCATC AAAGTTGTAA	3900
GTAGTTTGGC AGAATTGACA AGTGATTTCT GCCCGGTGTT CTTCCTCTTT CATTTCTGT	3960
AAGCTGAGC TTGGAAGGCT GGCAGAGCG TTCAATAAGC GTTCATGGCT ACAGTCACAT	4020
TGGAAACGGA TTTCTTCTTC AGAAAGACGC TTGTAGGCTT CGTCCCGTA GATAGCCCTG	4080
AGGAGGGCTT CGATATGGTC GTCGCTTTCG AGAAGAGTAG AGATAGCTGG CATTTCTTGG	4140
ATGCGTTTTT CAAGCGAGC AATCTCTTCT TTCTTGGCTC CTGGCAAGAC TTGAACTAGG	4200
AAACACCTG CAACCTTGAC CTTGTCTTTC TCCTCCAAAA GGACATTGAG GCGACCGCT	4260
GAAGGCGTTT GTTGGCTTTC AGTAAGGTAA AAGGCAAGGT CTTACCCGAT TTCTCCAGAG	4320

ATGAGGGGAG TTATAGAGTT GTAAGGATTT CCAGTACCGT AGTCTGTGAT AACGAGGAAT	4380
TGACCATTTT CAACAAAAGG TCCGACTAGG ACTTCACCAG TCGCAGTCTT TTTGATGTCA	4440
ACACCAGGAT TTTGAAACATA GCTTTTGAAG TTTCCCTTGG TATCAGCGAC GTTGATTAATA	4500
GCACCTAGAG AGCTAGATCC CAACACCTTA ACTGTAAGTT TGGTATTTCC TTTTTCATTTG	4560
GCTCGAGAAA TCTGGCTAGC GATTAAGATT CGACCAAGCG TACAGATTGA GCTAGCTTGG	4620
GTTTGATGTT TTTCTTGAGC AGTCCGGACG GTTTCAGTGC TATCAAGGAC AAAAGCACGA	4680
AAGGCTCCGC TTTCTGATAT AGTTTAAATA ATTTTATCCA TAGTACTAT TTTAGACATA	4740
AAATGCCCAA AGGGGGAGCC GTGTGTTTAC TGATTTTTCAG GATAATGGAC CAGGAAATCA	4800
GCATGAJAAT AAAAAGAGAA ACAGATTATT TTAGCATTTG TCAGATTAT GCTATGCTTA	4860
AGGTAGAAAA TGAAGGGGAT AACAAATGTA TTTAGGAGAT TTGATGGAGA AAGCCGAGTG	4920
TGGTCAATTT TCAATACTTT CTTTCTTATT ACAAGAGTCT CAGACGACCG TCAAGGCTGT	4980
AATGGAAGAA ACAGGATTTT CAAAAGCAAC CCTAACCAAA TATGTCACCC TGCTCAATGA	5040
CAAGGCTTTG GATAGTGGCT TAGAGCTGGC TATTCACTCA GAAGATGAAA ATCTGCCGCT	5100
GTCTATCGGT GCAGTACCA AGGGGAGAGA TATTCGGAGC TTGTTTTTGG AGAGTGCTGT	5160
TAAATACCAG ATTTTGGTTT ATCTTCTCTA CCACCAACAG TTTTITAGCC ATCAGCTGSC	5220
TCAAGAATTG GTGATTAGCG AGGCTACGCT TGGTCTGCTAC TTGGCTGGTT TAAATCAGAT	5280
TTTGTGAGAA TTTGATTTAT CCATCCAAAA TGGCCGTTGG CGAGGTCCAG AGCATCAGAT	5340
TCACATATTC TATTTCTGTC TTTCCGAAA GGTCTGGTCG AGTCAGGAAT GGGAGGCTCA	5400
CATCGAGAAA CCAGAGAGAA AACAGGAGAT TGCCAAATTA GAGGAAATCT CGGTTGCAAG	5460
TTTGTCTGCG GGGCAGAAAT TGGACTTGGT TCTCTGGGCT CACATCAGTC AACAACTCT	5520
TCGGGTCAAT GCTTGTGAGT TTCAAGTCAT AGAAGAGAAA ATGCGAGGGT ATTTTGCATA	5580
TATCTTTTAT CTTCGTTTGC TGAGAAAGGT TCCGCTCCTT TTTGCTGGGC AACATATTC	5640
ACTAGGAGTT GAGGATGGT AGATGATGAT ATCTCTCTCT TTTCTCCTAT CTCAATCGCAT	5700
TCTTCTCTCT CATTACTATG AGTATATCTT TGGTTTTGGA GGGCAGTTGG CAGATTTACT	5760
GACGCAATTG ATTCAGAAA TGAAGAGGA GGAACATATT GGGGATTATA CAGAGGACCA	5820
TGTACCTTAT GAACTCAGTC AGCTTTGTGC TCAAGTCTAT CTCTATAAGG GCTATATTTT	5880
ACAGGATCGC TACAAGTACC AGTTAGAGAA TCGTCATCCA TATTTACTGA TGAACAATGA	5940
TTTTAAGAG ACAGCAGAG AGATTTTTCA TGCTCTACCT GCTTTTCAAC AGGGGACAGA	6000
TTTATAGTAA AAGATCTCTT GGGAAATGCT CCAGTTAATC GAATATATGG CTGAAAACGG	6060

TGCCAGCAT	ATGCGGATPG	GTCTGGATT	GACATCTGGT	TTTCTTGCT	TTTCAAGGAT	6120
GGCAGCATT	TTGAAACGGT	ATTTGGAATA	CAATCGTTTT	ATTACCATG	AAGCTTATGA	6180
CCCTAGTCGG	CATTATGATT	TGCTGGTTAC	CAATAACCCG	ATTCTAAGA	AGGAACAGAC	6240
ACCGCTCAT	TATTTAAAA	ATGACTTGGA	TATGAGGAT	TTGGTAGCGA	TTGCCCAGTT	6300
ATTATCTACT	TAAAAGGCTT	GGTTAATCCA	GGCTTTTTT	GTGAAATTCA	CACAATCTCC	6360
TCACATTTTT	TTAAAAATTA	AAAAAAGTTG	ATAAACAAAG	AAGCGCTTTA	TTTTGTATAC	6420
TAGTAAGTGT	AAAGAGGAAA	CACCTCAAGA	TCTTTATCAG	GAGGACAGTA	CATGTCACAA	6480
GA AAAATACA	TCATGGCCAT	TGACCAGGGA	ACTACAAGTT	CTCGTGCCAT	CATTTTCAAC	6540
AAAAAAGGGG	AAAAGGTTAG	CTCGAGTCAA	AAAGAGTTTA	CCAGATTTT	CCCTCAGGCA	6600
GGTTGGGTTG	AGCACAAATC	CAATGAAATT	TOGAATCTCT	TTCACTCAGT	TATTGCGGGT	6660
GCTTTTACATG	AAAGTGGTGT	CAAGCCAAAT	CAATTCGAGG	CAATCGGGAT	TACCAACCAA	6720
CGTGAACCAA	CGGTTGTCTG	GGATAAGAAA	ACAGGACTTC	CTATCTACAA	TGCTATCGTT	6780
TGCGAGTCAC	GCCAGACAGC	ACCTTTGGCT	GAGCAACTAA	AAAGCCAAAG	TTATGTGGAA	6840
AAATTCATG	AAAAGACTGG	TTTGATTATT	GATGCTTACT	TCTCTGCTAC	CAAGGTTGCT	6900
TGGATTTTGG	ATCATGTAGA	AGGTGCTCAA	GAGCGAGCAG	AAAAAGGGGA	ATTGCTCTTT	6960
GGTACTATCG	ATACTTGGTT	GGTTTGGA	TTGACTGACG	GTGCGGCTCA	CGTACTGAC	7020
TACTCAAACTG	CAGCTCGTAC	CATGCTTTAT	AACATTAAG	AACCTAAATG	GGATGATGAG	7080
ATTTTGGAAA	TCCTTAACAT	TCCGAAGGCT	ATACTTCCAG	ANGTTGGTTC	TAACTCCGAA	7140
ATCTACGGCA	AGACAGCTCC	ATTCCATTTC	TACGGTGAG	AGGTGCCAA?	CTCAGGTATG	7200
GCTGGGGACC	AACAAGCAGC	CCTCTTTGGA	CAGTTGGCTT	TTGAGCCAGG	TATGGTTAAG	7260
AATACTTATG	GAACAGGCTC	TTTCATCATC	ATGAATACTG	GGAAGAGAT	GCAGTTGTCT	7320
GA AAAACAAC	TCTTGACAAC	CATTGGTTAC	GGAAATCAAG	GTAAAGGTTA	TTATGCCCTG	7380
GAAGGTTCTA	TCTTCATCGC	AGGAAGTGCT	ATTCACTGGC	TTCTGTGACG	TCTTGCAATG	7440
GTGAAAAAT	CACCAGAATC	TGAAAAATAC	GCTCGTGATT	CTCACAAAA	CGATGAAGTT	7500
TATGTGCTTC	CAGCCTTTAC	AGGTCTAGGC	GCTCCATACT	GGAAACAAA	TGCTCGTGGT	7560
TCCGTCTTTG	TTTGACTCG	TGGAACAAGC	AAGAAGACT	TTATCAAGGC	GACTTTGCAA	7620
TCTATTGCTT	ATCAAGTGCG	TGATATCATC	GACACATG	AAGTGAGAT	TCAGACCGCC	7680
ATTCAAGTAC	TGAAGGTGGA	TGGTGGTGCA	GCCATGAACA	ACTTCCTCAT	GCAGTTCAG	7740
GCGATATTTT	TAGGCATTGA	CATTGCACGT	GCTAAAAACC	TGGAACAAC	AGCTCTAGGA	7800
GCGGCTTCC	TAGCAGGTTT	GTCACTAGGG	TACTGGAAAG	ACTTGGACGA	GTGAAACTC	7860

TTGAACGAGA	CAGGAGAACT	CTTTGAGCCA	TCTATGAACG	AATCTCGCAA	GGAACAACTC	7920
TACAAGGGCT	GGAAGAAGC	TGTGAAAGCA	ACTCAAGTCT	TTGCGGAAGT	AGACGACTAA	7980
TACTGGCAGA	ATAAAGCGAT	TTATTTAGAA	AGTGTGTAAA	TATGGAATTT	TCAAAGAAAA	8040
CACCTGAATT	GTCAATPAAA	AAAATGCAGG	AACGTACCCT	GGACCTCTTG	ATPATCGGTG	8100
GAGGAATCAC	AGGAGCTGCT	GTAGCCTTGC	AGGCGGCAGC	TAGCGGTCTT	GAGACTGGTT	8160
TGATTGAAAT	GCAAGACTTT	GCAGAAGGAA	CATCTAGTCG	TTCAACAAA	TTGCTTCACG	8220
GAGGACTTCC	TTACCTCAAA	CAATTTGACG	TAGAAGTGTG	CTCAGATACG	GTTCCTGAAC	8280
GTGCAATGAT	TCAACAAATC	GCTCCACACA	TTCCAAATC	AGATCCAATG	CTCTTACCAG	8340
TTTACGATGA	AGATGGAGCA	ACCTTTAGCC	TCTTCCCTCT	TAAAGTAGCC	ATGGACTTGT	8400
ACGACCTCTT	GGCAGGTGTT	AGCAACACAC	CAGCTGCGAA	CAAGGTTTTG	AGCAAGGATC	8460
AAGTCTTGGA	ACGCCAGCTA	AACTTTGAAGA	AGGAAGGCTT	GOTAGGAGGT	GGAGTGTATC	8520
TTGACTTCCG	TACAACGAT	CGCCGTCTCG	TGATTGAAAA	CATCAACGCT	GCCAACCAAG	8580
ACGCTGCCCT	CATTGCCAAC	CACGTGAAGG	CAGAAGGCTT	CTCTTTTGAC	GAAAGTGCCA	8640
AGATTACAGG	TGTTGTAGCT	CGTGATCTCT	TGACAGACCA	AGTGTTTGAA	ATCAAGGCCCT	8700
GTCTGCTTAT	TAAATACAACA	GCTCCTTGGA	GTGATAAAGT	ACGTAAATTTG	TCTAATAAGG	8760
GAACGCAATT	CTCACAATG	CGCCCACTA	AGGAGGTCTA	CTGGGTAGTA	GATTCAAGCA	8820
AAATCAAGGT	TTACAGGCA	GTTTACTTCG	ACACAGGTTT	GGGTGACGGT	CGTATGGTCT	8880
TTGTCTCTCC	ACGTGAAAC	AAGACTTACT	TTGTACAAAC	TGATACAGAC	TACACAGGTG	8940
ATTTGGAGCA	TCCAAAAGTA	ACTCAAGAA	ATGTAGATTA	TCTACTTGGC	ATTTGTCAACA	9000
ACCGCTTCCC	AGAATCCAAC	ATCACCATTG	ATGATATCGA	AAGCAGCTGG	GCAAGCTTTC	9060
GTCCATTGAT	TGCAGGGAAC	AGTGCCCTCTG	ACTATAATGG	TGGAATAAAC	GGTACCATCA	9120
GTGATGAAGA	CTTTGACAA	TTGATTGCGA	CTGTTGAATC	TTATCTCTCC	AAAGAAAAAA	9180
CACGTGAAGA	TGTTGAGTCT	GCTGTACAGA	AGCTTGAAG	TAGCACAATC	GAGAAACATT	9240
TGGATCCATC	TGCAGTTTCT	COTGGGTCTA	GCTTGGACCG	TGATGACAA	GCTCTCTTGA	9300
CTCTTGCTGG	TGTTAAATC	ACAGACTACC	GTAAAGTGGC	TGAAGAGCTT	ATGAGGCCCG	9360
TGTTGACAT	CTCAAAAGCA	GAATTTGACC	GTAGCTTTAA	ATTGATCAAT	TCTAAACATT	9420
ACCTGTGTTT	AGGTGGAGAA	TTGAACCCAG	CAATGTGGA	TTCAGAAATC	GAAGCCTTTG	9480
CCCAACTTGG	AGTATCACGT	GGTTTGGATA	GCAAGGAAGC	TCATATCTGT	GCAATCTTTT	9540
ACGGTTCAAA	TGCACCGAAA	GTCCTTGAC	TTGCTCACAG	CTTGGACAA	CGCCAGGAC	9600



914

TCAGCTTGGC AGATACTTTG TCCCTTCAC	ATGCAATGCG CAATGAGTTG ACTCTTAGCC	9660
CACTTGACCTT CCTCTTCGT CGTACCAATC	ACATGCTCTT TATGCGTGAT AGCTTGGATA	9720
GTATCGTTGA GCCAATTTTG GATGAAATGG	GACGATTCTA TGACTTGACA GAAGAAGAAA	9780
AAGCAACTTA CCGTGCTGAT GTCGAAGCAG	CTCTCGCTAA CAACGATTTA GCAGAAATTA	9840
AAATTTAAGA AAAAAATAAA GAGGTGGAGG	GCAGCATTCG TTGTGCGCCG TCCCTTCTTT	9900
TTAATGGAGA CAGAAAGATG ATGAATGAAT	TATTTGGAGA ATTCTAGGG ACTTTAATCC	9960
TGATTCTTCT AGGAAATGGT GTTGTTCAG	GTGTGGTTCT TCCATAAACC AAGAGCAATA	10020
GCTCAGGTTG GATTGTGATT ACTATGGGTT	GGGGGATTGC AGTTGCGGTT GCAGTCCTTG	10080
TATCTGGCAA GCTCAGTCCA GCTTATTTAA	ACCCAGCTGT GACCATCGGT GTGGCCTTAA	10140
AAGGTGGTTT GCCTTGGGCT TCCGTTTTC	CTTATATCTT AGCCGAGTTC GCAGGGGCCA	10200
TGCTGGGTCA GATTTTGGTT TGGTTGCAAT	TCAACCTCA CTATGAGGCA GAAGAAAATG	10260
CAGGCAATAT CCTGGCAACC TTCAGTACTG	GACCAACCAT CAAGGATACT GTATCAAACT	10320
TGATTTAGCA AATCCTTGGA ACTTTTGGTT	TGGTGTGAC AATCTTTGCT TTGGGTCTTT	10380
ACGACTTTCA GCGAGGTATC GGAACCTTTC	CAGTGGGAAC TTTGATTGTC GGTATCGGTC	10440
TATCACTAGG TGGGACAACA GGTATGCTCT	TGAACCCAGC TCGTGACCTT GGACCTCGTA	10500
TCATGCACAG CATCTTGCCA ATTCCAACA	AGGGAGACGG AGACTGGTCT TACGCTTGGA	10560
TTCTGTGTGT AGGCCCTGTT ATCGGAGCAG	CCTTGCCAGT GCTTGTATTC TCACCTTTCT	10620
AGTTTATACT CTTCGAAAAA CAAATTCAAA	CCACGTCAGC GTGCGCTTAC CGTACTCAAG	10680
TACAGCTTGC GGTAGCTTC CTAGTTTGTCT	CTTTGATTTT CATTGAGTAT TAGAAAAACA	10740
TTATGTGTAT AGAGCTTGGG CAAGAGCCCA	ATTTTCAGCA AAATGAAGT AATCTTCTC	10800
ATAATAAAAC GCATCATATC AAGCACGAAA	ATTCCACGAG GTCAACTACA GTCAGAAAGC	10860
TGAACAACAA GCCAAAACGC CCAAAAAGG	CGGCAAAAAG CAAGCACCTG CAAGCAACGT	10920
GCGAAATGG TCAAAATCCTG ATTATGTCAA	CGAATTAGAC CCAAAAATCG TTGATATGCT	10980
AGTAGAATTT CACAAGTCAC AAGGCACTTT	GGAACTCCC GAGGCGCAAG CAGAAATGCG	11040
CCAAAAACGT GAAGAAATCG AGCAAAGGAG	AGCTGAGCTT GAGGGTAAAA AACAAGAGCT	11100
TTTGAACGCG TTGAACAATAT AGAGTTTCGC	AAATATTATG CTTACAAATT ACTTGAGCAT	11160
TTAACTAAAA TATAAACCTT GCCTTTATAT	CTAGGCAGGG TTTATATTTT AGAAATTCAC	11220
GTAGTGTGTT ACGGTTTTTA CATACCCAGT	ATAGTTTGAG TTTCTATAGT ATTCAGTGAT	11280
AAACTTCCAT TTTCTTTGAG CAACATGGAT	ATAAGTACTT GTTATGTAGT ATGATATGG	11340
GCTTTGTGAA TCCAAGTAAG ACTGATAAGC	TGTATATCCA AAATATGCTC CACCAATTAT	11400

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TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC 11460  
 ACCAGTCATG AAGTTAGCGA ATGTGTTAGC TTGTTTATTC CCATGTATTG TGTTGACGTA 11520  
 ATTCCAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTGATTTT CATTCCTTTG 11580  
 ATAAGCCATA TAAATGCCC CATTTGATATA GACGCGTCA GCACGTGTT CAATAGTGTG 11640  
 TACACTTCCA TCTGGATTGA CAACCTCAAG AACTTCATCG CTTAAATAT TTACTTGGGT 11700  
 ATCTCCGAAC CGCACTGATG AGCCATTCTC AAACGAGCC TCACCAGATA CAACTTAGA 11760  
 GTTTCGCGAT AAGCTATCAT CAGCAAAAAC AAACAAGCGA CGGGGAAATG CTAGACATAC 11820  
 AGAAAAACGA CATAACTAGC AAACACATGC ATTTAAACAT CTTAGACATA ACGGAAACTC 11880  
 CTTTGTATTT TTGATTTTTT TCAACTTTTA TTATACAATA AAACCAATA AAAAGAAAGC 11940  
 GGTAAACAATA TGCTTAATGC GAAAATTTTT TATATATTTT TATGTTTGTG CGTTATCGAA 12000  
 ACTACAGGTG TGTGTTGTT GAAAAGAGGT CTCGAAATGG GTTATTTAGA CACAGAAGCT 12060  
 ATTATCTCG CAGTTTTTTT ATTTGCTTTT TACAACCTAT GTTCATTTCG TTGGGTCTCG 12120  
 TCTACAATAA AAAACAATAA AAAATAAATA GACGTATTTT CAAAAAAAC maAATGCATA 12180  
 TTTATATTAG CAAAACGACG ATTTAAATCG TCGTTTTTTT GTAGTACGAC GGGCATGTCG 12240  
 TATATCTGAG GTGTAAGTCC TCAGCCTGAC TATCGTGAGG TAGCAGGGAG AGGAAGGGAT 12300  
 AGCGAAATCG TGGCTCTACG AACAGGAACG TGATAGTAAG GCGTATATAG CGGATAAGGA 12360  
 GGCCTCAAC TCTAAAGTCC AAAAAGGTAG TCGTAACCTA TATGTGTAAA TCACGAGAGT 12420  
 AATTGAATTC GGAATAAGGT TTGTGTGAAA AAGATAAATC TTTCTAGAGT CTAAGAGTC 12480  
 TCGCTCAGAT TTCCTATTTT CACTGTAAAC TTTTAACGTC CTCATATCTT GTATAAACGA 12540  
 GGAAGATGT ACGACTTATC CCGTGAGGTT TCATGAGCGT GAAAGCGTAG TAACAACGAA 12600  
 TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAACCTT CCGTAATGGA AGTGAGCGGA 12660  
 AGGGG 12665

## (2) INFORMATION FOR SEQ ID NO: 135:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5305 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

CGCTAATCAC TACAATCATT TTATTGTACT TTTTCACCTC CAAGAAAAGC AAGAAGTATT

60

CATTTTAGTT	TCATTAGTA	TTATTTTGCA	TACCTAAAA	ACAGTAAAA	ATCAGTCATC	120
TTGGTATGCT	CTGCTTTTCA	CTATTCAACA	CGTTTTTGAC	TTATACTAGG	CTCATTTTCCA	180
AAAGCATTTAT	ATTAATAGTGA	TATGAAACCA	ACTAAACTAA	ACAAGAAATA	TAAGCAATAA	240
AAATTCTGTTT	AAAAGATCTT	ACTAAGCTA	ATACTAAATA	AAAAATAAAG	AGTAAACTAG	300
GAGCTTTTAT	TCAACAACCC	TAAAAACTG	ATTTTCGGCT	GAAGATAATA	CTGGAGTGCA	360
AATTAATGGG	GTTATAATAA	ATAGCTGATA	GC'TTGTGTG	GTTTGGATT	TTTAAAGAT	420
AGATGAGTAT	TAAACTATA	AGGAGGACGA	AGGTGGCTAA	AAATTTAAAA	TTAAJAATTAG	480
CTCGGTAGA	CGTGATTTA	ACACAAGGT	AACCTGGCAGA	GGCTGTCGGG	GTGACACGCC	540
AGACTATTGG	TTTAAAGAG	GCGGAAAAAT	ACAATCCAG	TCTCTCGCTC	TGCCAGTCTA	600
TTTGCAATG	TTTAGGAAA	ACCCTAGACC	AACATTTTG	GGAGGAAGAA	GATGAAAAAT	660
AGATTTTATT	ATTTCTCAAT	ACTAGACGAA	AGAGAAGAAC	AACCTGTTCAT	TAAAGCGGGC	720
TCTGAAAGCT	TCTATATCTG	CATTGCTTTG	TGCTCCTAT	CTTATATCAT	TTTCAATTA	780
GCACCAAGCC	TTTTTAATTC	TAAATAGCTG	CTAATGTTA	TCATCATAGG	GACATTTTAC	840
TTTTTCAATC	GTGCCCGTTA	TCTGGGAGTG	ACCTACTATG	GTGCTTTTCA	TTTTACGATT	900
TTGGGTTGTT	TTTTCTTAAC	CTTGGCTATT	ACGGCTCTTT	TGATGTTGCA	GAATTATCAA	960
TTCAACATAG	AAATTTATCA	GCACAATCCT	TTGAATTTTA	AATACCTGTC	TGCTTGGGTC	1020
ATTACTTATA	TCAATTACCT	TCCGTGGATC	TTTATTGCCA	ATCTGTGCTC	TAAGAGCTAT	1080
GGCGAATGGG	CTCAGAAAAA	ATTTGAACAA	GATATGGATG	AATTTGGAGG	TGGAGAATAG	1140
CTTGTACTTC	TTTTCTCAAT	CCAGCTAAAA	TGTATATAAA	TAGTACTAAT	TTATTGGAAAT	1200
ACATGAAAGT	TCTTGAJAAT	TTTCAATGGT	TTCTAGCTAA	GGAAAGTAGA	AAAGTATGTA	1260
TCCAGATGAT	AGTTTGACAT	TGCACACGGA	CTTGTACCAG	ATCAACATGA	TGCAGGTTTA	1320
CTTTGACCAA	GGGATTCACA	ATAAGAAAGC	GGTCTTTGAG	GTGTATTTCC	GCCAACAGCC	1380
TTTTAAGAAC	GGCTATGCGG	TTTTTGACAG	TTTGAAGA	ATTGTGAAC	ATCTTGAAGA	1440
CTTGTGTTTT	TCAGATAGTG	ATATAGCCTA	TTTGGAGTCG	CTTGTATATC	ATGGGGCGTT	1500
CTTGGATTAC	CTTCGCAATT	TCAAGTTTGA	GTTGACCGTT	CGTCTGCCCC	AAGAAGGGGA	1560
TTTGGTTTTT	GCTAATGAAC	CGATTGTGCA	GTTGGAAGA	CCTCTAGCCC	AATGTCAGTT	1620
GGTCGAJAGC	GCTCTTTTGA	ACATCGTCAA	CTACCAGACT	TTGCTGGCGA	CGAAGGCACG	1680
TGCTATTCGT	TGCTTATCG	AAGATGAACC	CTTGATGGAG	TTTGGGACAC	GTGCGGCTCA	1740
AGAAATGGAT	GCAGCCATCT	GGGGAACACG	CGCAGCTGTG	ATTGTTGGCG	CCAAATGGAAC	1800
CAGCAACGTG	CGTCCGGGTA	AGCTCTTTGA	CATTCTGTGT	TTGGGAACCC	ATGCCCATGC	1860

CTTGGTACAG GTTATGGCA ATGACTATGA AGCTTTCAG GCTTACGCTG CGACCCACAA	1920
AAATTGTGTC TTCTTTGTGG ATACCTATGA CACCCCTCGC ATCGGTGTAC CAGCTGCAT	1980
TCAGGTGGCG CGTGAGCTGG GTGATCAGAT TAACCTTATG GGTGTGCGA TTGACTCTGG	2040
GGATATTGCC TACATTCTTA AGAAGTCCG TCAGCAACTG GATGAGGCTG GATTACAGA	2100
GCTAAGATT TATGCTCTTA ATGATCTAGA TGAATAATCC ATCCTTAACC TCAAGATGCA	2160
AAAGGCCAAG ATTGATGTCT GGGGTGTGG TACCAAGCTG ATTACAGCCT ATGACCAGCC	2220
GGCTCTTGGG GCGGTTTACA AGATTGTTGC AATCGAAGAT GAAACTGGTC AGATGCGCAA	2280
TACGATTAAAG CTGTCTAATA ATGCTGAAAA AGTTTCTACG CCAGGTAAAG AGCAGGTGTG	2340
GCGCATTACC AGTCCGTGAAA AAGGCAAGT AGAAGGCGAC TATATCACTT ATGATGGTGT	2400
GGATATTAGC GACATGACAG AAATCAAGAT GTTCCATCCG ACCTATACAT ACATCAAGAA	2460
GACGGTTCGT AATTTTGAAG CCGTTCCTCT CTGGTGGAT ATCTTCAAG AAGGAATATT	2520
AGTTTACAAC TTGCCTAGTT TGACTGACAT TCAGGATTAT GCCGTAAAG AATTTGACAA	2580
GTGTGGGAT GAGTATAAGC GTGTGCTCAA TCCGCAAGAC TATCCAGTGG ATTTGGCGCG	2640
TGATGTATGG CAAGATAAGA TGGACTTGAT TGATAAGATG CGCAAGGAAG CCGTTGGTGA	2700
AGGAGAAGAA GAATGAGTTT GCAAGAAACG ATTATCCAAG AGCTGGGTGT CAAACAGTG	2760
ATTGATGCCC AGGAAGAAAT CCGTCTGTCT ATTGATTCTT TAAAAAGATA TCTGAAAAAA	2820
CATCCCTTCC TAAAAACCTT TGTAAGTAGG ATTTCTGGGG GACAAGACTC AACCTTGCCA	2880
GGACGTTTGG CGCAATTAGC TATGGAAGAA CTGCGAGCTG AAACGGGAGA CGATAGCTAC	2940
AAATTTATCG CTGTCCGCCCT GCCATACGGA GTGCAAGCTG ATGAAGCAGA TGCTCAAAAA	3000
GCCCTAGCCT TCATCCAGCC AGATGTCAGC TTGTTTGTGA ATATCAAGGA ATCAGCTGAT	3060
GCCATGACAG CTGCAAGTTA AGCGACAGGT AGTCTGTTT CAGACTTCAA CAAGGGGAAT	3120
ATCAAGGCAC GTTGCCCGTAT GATTGCTCAG TATGCCCTTG CTGGTTCCCA TAGCGGAGCG	3180
GTCAATTGAA CAGACCAAGC GCGGAAAAAT ATCAGAGTT TCTTTACCAA GTTTGGTGAC	3240
GGCGGTGGCG ATATTCTCCC TCTTTACCGC CTCATAAACC GCCAAGGAAA ACAGCTCTTG	3300
CAGAACTTGG GCGCAGAGCC AGCCCTTTAT GAAAAATCC CAACGGCAGA CCTAGAAGAA	3360
GATAAACAGC GCCTAGCTGA CGAAGTCGCA CTGGAAGTCA CCTACGCAGA GATTGACGAC	3420
TACCTAGAAG GCAAAACAAT CAGCCAGAAA GCTCAAGCGA CCATTGAAAA CTGGTGGCAC	3480
AAAGGCCAAC ACAAAAGCCA CTTACCCATC ACCGTATTGG ATGACTTTTG GGAGTAAAAA	3540
GGTCCGGGGG ACCTTTTTAG CTTCTTGCCC TGAATTTAAA AAGCAAGAAA AACCTCCACT	3600

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GGAGGTTTTC AGCCTCTCAT CTGAAATAA GAAAGTGAGA GAAGTCTGG GGGATCTTGA	3660
ACCCCCAGTT TAGAATAAG AAAATGAGGC AGATTAGTA ACTCGAAG TTCGATTTC	3720
TGCTCTTACC CCTGCAACGA TGACTAGGTT TGA AAAAGCT TGCTAGAGCG CATTTCAAAC	3780
CAGGCAGCAA CTGGCTCAAG AAATTAGAAG ACAAACTCGT TTCTAGCTG TTA CTGAGTT	3840
GAGCCTTTTT ACTACGAGTA TAGAATAAG GAAGTGAGT AOCATCATGA AATCTATCGG	3900
TACGCAATA TTAGAGACAG AACGTTTGAT TTTAAGAAGA TTCTGGAGA GTGATCCAGA	3960
AGCCATGTTT CAAAAATGGG CTTCATCCGC TGAGAACTG ACCTATGTGA CCTGGGATCC	4020
CCATCTCGAT GTCGAAATCA CTGAAACTC GATTTCGAAT TGGTTGCTT CCTATACTAA	4080
TCTCAACTAT TATAAATGGG CCATTGTCT AAAAGAAAC CCAGAGCAAG TAATAGGAGA	4140
TATCAGCATT GTTAAGATAG ACGAGGCTGA TTAAAGCTGT GAAATGGCT ATGTGTTAGG	4200
CAAGGCTTAC TGGGGAATG GTATGATGAC AGAGACTTGG AAGCTATCT TGACCTTTG	4260
TTTTACTCAA GCAGGTTTC AAAAGGTCAG AGCAGTTAT GOCAGTCTCA ACCAGCTTC	4320
AGGTCTGTCT ATGGAAGAG CTGGAATGTC CTATCTCAA ACCATTGTTA ATGGTGAGA	4380
GAGAAAAGGC TATCTTGGCG ATCTTATTTA TTATGTTATA AGTAGGGAAG AATGTTGAAT	4440
TCTATTTTCT CTTCTATCG AAGTCAACTA TTTATTGTAA ATATAATAAT TAGCATTCOA	4500
AGTTTATTG AAACCTTAAA ATAGCATATT GATTAGTACA AGACAGATGT TCTAGTTCTT	4560
TCTTAACTCT GGTTTAGTGT TAGTTAAAAA ATCGCTTTAA GCTTGTAAT AAGAGGGAGC	4620
TAATCGACTA GATTCTCCAG CCGAACAGGT GGTAAATGAC TTTTATAGT GTAATCCTAG	4680
CTGTGTGTAA ATTTAAATA GAATCCTCTA TCGAGTTAGG GAATTAAAT CAACCAATTT	4740
TATTCAATGT TTTCTATCA AATTATCTAA TATTAAATA GTCTCATTTCT GATGAGAAAA	4800
CTATTCCAA ATCATTCATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCTGACCTC	4860
ATGAGCCACT TTCTTCTCC TCATGAGGTC AGTTTACTT TCTGCTGTC CAGTATCGTT	4920
TTTCTCGCT AGATTCTCTC AAAAGGGCAG ACTCTCCCT TGGTGGCTCA CAGGATTTT	4980
TCATCTCGAC TGTTCTTAA TGCATATTA ACGACGCTTT TCTTCTAGT GGTTCATAAG	5040
GAACAGGAAG ATTCAAGTTG ACTTTCTTAA TCCTAGAATA AAGTCTGAA ACAATTCGG	5100
AATAGGCATA GAGACTAGAC AATTGAGGA GCTGCTTGG TCCTGTGCA ACACATTTC	5160
CCACCACCTC AAGAAAGA TGCGGAAGC GTTTGATTGT TAAAGTTTG AAGTCACCTC	5220
CAGCTAGATG TTTGAGAAA AGATAGAGAT TGTAAGCGAT ACAGCTCATC ATCATCGAA	5280
CTTCGTTTTT GATTAGGTT GAAC	5305

(2) INFORMATION FOR SEQ ID NO: 136:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 3964 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

TGCGAGCTCG TCGTCGTAAA GGACGCAAAG TTTTGGCTGC ATATCCAAA CGAATCTAT	60
CAAAAATCAG TAGGAATCG AGTCTACTGA TTTTATTTT TGTAAAAAG TTCAGTAGAT	120
GCAATGGAT TCGAAGCGA TGTACAGTA GATTGAACT AGAATAGTAC ACCTCGTGT	180
CTAAAAATT GTTAGAAATC GATTTCAGTG TCTGATCGA TTTCCTCTGT TATTATTTTA	240
TTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCA CAATCGTCTT TAAAGATGGT	300
TCAGCTATTA CAATTCCAGG AAACTCAATTG GTAGCACAAG ATCCAAAAGC ACAGATAGC	360
ACTAAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA	420
GATATAAECT ATTTAACAGA TGAAGAAAA GTTAAGGTTG CTATTTTACA AGCAATGGT	480
TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC	540
CCAGATGGTT CAGTAGTCAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAGGT	600
GAATCTGTAA CTCAGAAGC TACACCAGAG TATAAGCTAG AAATACACC AGGTGGAGAT	660
AAGGGAGGCA ATACTGGAAG CTCAGATGCT AATGOGAATG AAGGCCGTGG TAGCCAGCG	720
GGTGGATCAG CTCACACAGG TTCACAAAAC TCAGTCAAT CACAAGCTTC TAAGCAATTA	780
GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAAGA CAAGCAGGAT	840
GAAATCAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA	900
GCAGAAAAAC AAGCAGCTCT CAAGAGATT GAAAAATGCA AAATATGGA AGATGTGAAG	960
GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG	1020
GCTCCTAATG CTGCTCCTAA GACAAACAAT GCACCGCAG CAATTCGAGG AACCAATGAA	1080
GATGTTACCT ACCAGTCACC TGCCTGCCAA CAATTACCTA ACACAGGTTT AGCATCAAGT	1140
GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA	1200
AAGACTAGAC GTAGAAAAA GAACAGCTAG AAAATTCAT TCTCTACTTA AAGTTAGATT	1260
ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAAT GAGAACCCAA	1320
GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA GTAGCCAAAT CTCCTCTGTC	1380
TCTAAGCTGT GAAATAGAGA TGGCAATAT CUGATAGAAA AGATAGCAGA ATAGCTCTCT	1440

	920	
ATGTGAAGAGA	GGAGGGGAAA	CCGAAAAAATT AGGTGCCCCCT CCTCTTTTTT GGTATAATAG 1500
AAGATAGAAA	ACGAGGTAG	AAGAGATGAT TTTTGTATACA CATACACACT TGAATGTAGA 1560
AGAAATTGCA	GGTCGTGAGG	CAGAAGAAAT TGCCCTGGCT GCTGAGATGG GTGTGACACA 1620
GATGAATATT	TTGGTTTGTG	ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA 1680
GTATGAGCAG	CTCTATCGCA	CTATTGCTTG GCATCTTACA GAAGCTGGTA CTTATACAGA 1740
GGAAAGTTGAG	GCTTACTTGT	TGGATAAGTT AAAACATTCC AAGTTTGTGG CTTTAGGTGA 1800
AATTGGCTTA	GATTACCATT	GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG 1860
CCGTGAGATT	CAGCTATCTA	AGGACTTGGG TTTGCCTTTT GTTGTCCATA CCCGTGATGC 1920
GCTGGAAAGAT	ACCTATGAGA	TTATCAAGAG TGAGGGCGTT GGTCTCTCGT GTGGTATCAT 1980
GCAITCATTT	TCAGGGACGC	TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT 2040
TTCTTTCTCA	GGAGTGGTGA	CTTTTAAGAA GGCAACTGAC CTCCAAAGAG CAGCTAAAGA 2100
GTTACCTTTG	GACAAAGATG	TGGTGGAAAC AGATGCGCTT TACTTAGCAC CTGTACCCAA 2160
GCGTGCTCGT	GAAAATAAAA	CAGCCTATAC TCGCTATGTG GTCCGACTTTA TCGCTGACTT 2220
GCGTGGTATG	ACGACAGAAG	AGCTGGCGGT AGCAACGACT GCAATGCAG AACGAAMTTT 2280
TGGACTGGAC	AGCAAGTAAT	GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGGCGT 2340
GATGATACGG	TCAATCTCAA	ACGTTATTTT GATGTGAGA CTTATGAGAC TCGAGGTTCT 2400
GCCATCAATT	CTCAGGATAT	AGAGCGGATT CAGCGCTCGC ACCAACGTCA TGGAGTCATT 2460
GTCTTTACAG	ACCCAGATTT	TAATGGGGAA CGGATTCGGC GCATGATCAT GATGGTCATT 2520
CCAACAGTTC	AGCATGCGTT	TCTCAAGCGA GATGAAGCTG TTCCCAGTC CAAGACCAAG 2580
GGGCGTTCTC	TGGGAATTGA	GCATGCCAGC TATGAAGACC TGAATAACGC TCTAGCTCAA 2640
GTGACAGAAC	AATTTGAACA	TGAGAGTCAG TTTGACATTA GTCTGAGCGA TTTGATTGCG 2700
CTTGTTTTC	TAGCAGGGGC	AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC 2760
CGAATCGGCT	ATTCCAACGG	CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTTACT 2820
TTGGCAGAAG	TGAAGAAGC	TATGAATCTT TATGAGTAGG AAAGATGTAG CCGTTACAAT 2880
TTTTTAAGTT	TTCAGATATT	TTTCGAAGCA GGTAGAGAG GAGGCGTCTG ATGTTAATTG 2940
GTCAAAAAAT	TAAAGAGATT	CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG 3000
ATGAGCAAGA	ACTGACAGTT	CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA 3060
GTTTGCCCAA	GTTAGACTAT	ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC 3120
CGGATTTTTT	AGCTCTCTCT	TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC 3180
CAATCTATGG	TAAAGAAGAG	GAGTACGATA AGAAGGAAGC GTGTTTGGAA GAGATTTATA 3240

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AAACATACTT	TGATAATCTT	CCTAAAGAAG	AACAATTAGC	ATGTGAAGTA	TTGCAGCGGT	3300
GTTTGGATAC	TTCTAGAACT	AGAAGGCCCTG	AATATCGAGA	GTTAATACTT	GAGGAACATA	3360
TGCTCAGAT	TATAGAAAA	GAAGCTTATT	CAATAAATGA	TATGTTGTTG	ATTGTTTTGT	3420
TTTTTTATCA	AATGCTCAT	AGAAAAGATC	TTGCCAAATT	TATAAATCAA	ATCGAAAAGC	3480
TAATGCTCTT	TCTTTTGGAA	CAGAAGAAGG	TAACTCAAAT	AGAGAAATAC	TTTATAAATTA	3540
GAGATACTCT	TATTTCAGGA	ATGTGTTGTC	TTGAAAAGGT	AGGAGTAAC	GATTGTTTTA	3600
ATGATTATCT	ATCGTGTTTA	CAAGAAATTA	TGGATAAAC	TCAAGATTAT	CAAAGAAGAC	3660
CTCTGTGATT	TATGTTTTTG	TGGAAGCAAG	CATTAGAGA	AGAAAGAGAT	TTTAGTTTAC	3720
CTGAATCAT	TTATCAGTCT	TCTAAAACAT	TTGCGCAGCT	AATTGGAGAT	GAATTTCTAG	3780
TAAAGAAATT	GACAGAGGAA	TGGCAAGAGG	ATGTCAAAAA	ATATTTATAA	ACATAGTGAA	3840
TCAGTGACAA	AGATGTCCTT	GTCTCTGAT	CAAAACAGTT	CTAAAGTTCG	TCTTTAGGGA	3900
TGTTTTTTTA	GATATAAGCT	AAAAATGACA	CGAAATGGTT	AGATTTTAAG	GACATTGATG	3960
TCCG						3954

(2) INFORMATION FOR SEQ ID NO: 137:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 12666 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT	ATTTGTATTA	GGGAAATGGG	TATCTATTTT	TAATGCTGTG	GGGATTTTGA	60
TTGTTTCTAT	TATTCAAACC	AAAAGCTTGT	CAGGTATGGG	AGCAGGATTC	TTTAATCTAT	120
ATAACATTTT	ATCTTATATA	GGTGATTAG	TTAGTTTCAC	TCGATGTGAT	GCATTAGGAT	180
TATCTGAGC	AAGTATAGCA	TCAGCTTTCA	ATTAAATGTT	TGGTTTGTCT	CCGGGAATAT	240
TGGCTAAACT	GACAATTGGA	TTAGTATTAT	TCATTCTTTT	ACATGGGATC	AATATTTTTC	300
TATCGTTACT	ATCAGGATAT	GTTCATGGAG	CACGTCGTAT	ATTTGTTGAA	TTTTTTGGTA	360
AGTTTATGCA	GGGTGGAGGA	AAACCATTTT	AACCTTTGAA	GGCTTCTGAG	AAATATATTA	420
AGGTATTATC	AAAGATTAA	TGGAGGATAT	ATATAATGGA	ACATTATGCA	ACTTATTTTT	480
CAACCTATGG	AGGAGCTTTC	TTGCTGTGAT	TGGGAATTGT	ATTTGGCGGT	GGATTAAAGC	540
GTATGGGTC	TGCTTATGGA	GTTGGTAAGG	CTGGGCAATC	TGCCCGAGCT	TTACTGAAAG	600



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AACAGCCTGA	AAAGTTTGCC	TCAGCTTTGA	TATTGCAATT	ATTGCCCGGA	ACACAAGGAT	660
TATATGOTTT	TGTTATTGGA	ATTTTAAATT	GTTTGCAATT	AACGCCAGAA	CTTCCTTTAG	720
AAAAAGGCGT	TGCTTATTTC	TTTGAGCTC	TTCCAATTGC	TATTGTAGGA	TACTTTTCAG	780
CTAAGCATCA	AGGAAATGTA	GCAGTAGCGG	GAATGCMAAT	CTTGGCTAAA	AGACCAAAAG	840
AATTTCATGA	GGAGCAATT	TTAGTGCCA	TGATAGAAAC	CTATGCAATT	CTTGCTTTTG	900
TGTTATCAAT	CATTTTGACC	CTTCGTGTAT	AAGAAATAAA	TTTGCAATTC	AAAGGAGGTG	960
TCTAAATGAG	CAATTTAGAA	AACCTACGAG	AGTCGTGFIAT	TGAACAAGCT	CATGAAAAAG	1020
GGCGTATGAA	ATTATTGGAT	TCCAAAAAGA	AGATTGATGA	TGAATTTGAA	ATGCAAAAGT	1080
CGCTCATTTAT	AAAGAAAAAA	GAAGCTGAC	ATGAACGAAA	GTTAAAAGAA	TTGCAACAGA	1140
AATATCAAAAT	AATTTTTCAA	CAATTAAAAA	ATAAGGAACG	CCAATCAACG	TTAGTATCAA	1200
AACAGAAAAAT	ATTAAAAAGA	CTTTTTCAT	CTGCTTACT	AGAAATGGAA	TCTTGGAGTG	1260
CAGATAAAGA	AATGGAGTTC	ATCTATCGAA	TTCTGGAAACG	ATATTCACAA	CAAGAGGTCA	1320
TAGTAACTTT	TGGGGAACGG	ACTTTAGCTA	AATTCMAATT	GGAAACAATTA	GAGAAATTGA	1380
AATTCCTCTT	TCCAAATTAT	TTATTAGTGT	AACAACCTAT	CTCAAAATGAA	TCAGGCTTAC	1440
TTATTTCAT	AGGTAAATTT	GATGATAACT	ATTGTATATA	AACATTAAAT	GGATCGATTT	1500
CTAAGGAAGA	AAGTTCAAAT	ATCGCAATTC	AAATTTTAT	CAATTAAAGGA	TGAAATGGT	1560
TAATCCTTCT	TAGAAATTTG	GAGTATTCCA	ATRAAATTAG	AAAGGTATTT	TATGGATACT	1620
AATCTTTTTT	CAAAAATAAA	TACGACGATT	TCGGTAAJAG	AAAACGATTT	TATTACAGAA	1680
GAAAAATTTT	AAAAAATTAT	ACAAATCCAAA	GATACGGAGA	CATTGGCATT	TATCTTAGAA	1740
TCAATCTCCT	ATCATTTATC	GATTGACATC	TTAGAAGATC	CTAGTCAGAC	AGAGATTTTG	1800
CTAATGACAA	AATTACTCAA	TGATTATAGA	TGGGCTATG	CTGAAAGTCC	GTCTGATATA	1860
ATTGTGACTT	TATTGTCTTT	ACGATATGTT	TATCATAATA	TCAAAGTTTT	ATTAAAAATCT	1920
AAGGCGCGAA	TTAAGAAAGA	TTTTTCTAAA	TTATTAAATTC	CAATAGGAT	TTTTGATATA	1980
GAAAGTTTAA	AACATTTAGT	TTCTTCCTTA	CATTGAGATA	CACCTCCTGA	TTTTATGGTT	2040
CGTGAAGTAG	AATCAATTTG	GAATGAGTAT	GAAACTTTTA	ATAATATTCG	TGTACTTGAT	2100
GTGGAGCTGT	ATCTAGCATA	TTTTAAACAT	CTGAAACTTT	TATCTAATGA	GTTAGATGAG	2160
GTACTGTCTC	AGGTATTGT	CGAAATGAT	GACTTTTATA	ATATTATTAC	TGTAAAACGT	2220
GGTTTATCTC	AAAAAAGAG	TCATGGGGAT	ATTTTACAAAT	TACTTTTACA	TGAAGGAAGT	2280
ATTTCTGCTA	AAGAATTTAT	ATACATTGTA	GAAATCAAG	AAATATTTGT	GTGGTTCAAT	2340
AAAAATAACT	CAAGCTTAGA	TTCAATCTTT	TCAACTTATG	AATTGAAGAT	GCAGGACGCA	2400

ACAATTTTCAT	CTTCTGAGTT	AGAATTTTAA	TGTGATTTCAC	TATGTGTATAA	AACTTTAGAT	2450
CAAGGAAGGT	ACAAATGTAGA	GGGGCCGTTA	GTTCTTTGCTA	GATATTTTATT	GGGATGTGAG	2520
TTTGAAGTAA	AGAACTCTCAG	AATGATCATA	TCAGCTCTTC	AAAATACAAT	TCCTTTTGAA	2580
TCAATAAAAG	AAAGGATACG	CCCACATTAT	GGAAAGCTAAT	AGGTATAAAA	TTGGCATAAT	2640
TGGTAGCCGT	GATATTTATTT	TACCATTTAG	CATGATTGGG	TTTGATATAT	TTCCTCGCCTA	2700
CCAAGAACAA	GAAGCTATAA	ATACACTAAG	AAAATTAGCT	CAATCTGATT	ATGGTGTTCAT	2760
TTATATCACT	GAAGACATTG	CTTCAATGAT	ATTAGATACA	ATTCGCCATT	ATGATTCCCA	2820
AGTTGTGCGT	GCTATTATTT	TATTACOGAC	TCATAAACAA	GGTTTAAATT	TAGGATTAAA	2880
ACGTATAGAG	GATAATGTAG	AGAAAGCAGT	AGGACACAAT	ATTTTATAAT	AACTGTACAAA	2940
ATTGTCTGTA	ATATTATTCT	ATAATTTTGT	GACTTAGTAA	GGAGAATAAC	TTTGACTCAA	3000
GGGAAGATTA	TAAAAGTATC	GGGACCTCTA	GTTATTGCAAT	CAGGTATGCA	GGAGGCTAAT	3060
ATTCAAGATA	TTTGGCGGT	AGGTAAAGCTA	GGGTTAATCG	GTGAAATTAT	TGAATAGAGA	3120
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GTTGTTACAA	CTGGAGAAC	CTCTCGGTT	GAATTAGGGC	CAGGATGTAT	TTCTCAAATG	3240
TTTGATGGCA	TACAACGCC	ATTAGATCGA	TTTAAATTGG	CTACTCATAA	TGATTTTCTA	3300
GTTCTGGGG	TAGAACTTCC	AAGTTTGGAT	AGAGATATTA	ACTGGCATT	TGATTCCACT	3360
ATAGCAATTG	GTCAAAAAGT	GAGTACGGGT	GATATTTCTG	GAACGTGCAA	GGAAACCGAG	3420
GTAGTTAATC	ATAAAATTAT	GGTTCTTAT	GGAGTATCTG	GAGAACTCGT	TTCTATTGCA	3480
TCTGGCGATT	TTACAATTGA	TGAAGTTGTA	TATGAAATAA	AAAAATTGGA	CGGTAGTTTC	3540
TATAAAGGAA	CGCTTATGCA	AAAAATGGCT	GTCCGCAAGG	CGGCTCTGTT	TTCTAAACGT	3600
TTAATTCCAG	AAGAACCATT	AATCACAGGT	CAACGAGTTA	TTGATGCATT	CTTTCACGTA	3660
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CACCAAGTAG	CTAAATTGCG	CAATGTTGAT	ATTGTTATTT	ATGTCGGTGG	TGGAGACGTT	3780
GGAAATGAJA	TGACGGATGT	ACTGAATGAG	TTTCTTGAGT	TGATTGACCC	TAAATACCGGA	3840
CAATCAATTA	TGCAACGGAC	AGTTCTGATT	GCTAATACTT	CAAAATATGCC	TGTTGCTGCT	3900
CGTGAAGCTT	CAATTTATAC	AGGAATTACC	ATGGCTGAGT	ATTTTCTGTA	TATGGGCTAC	3960
TCGTGCGCCA	TTATGGCTGA	TTCAACTTCA	CGTTGGGCAG	AAGCGCTACG	TGAAATGTCA	4020
GGACGTCTAG	AAGAAATGCC	TGCTGATGAG	GGTTATCTCT	CTTATCTGGG	AACTGCTATC	4080
GCTGAATATT	ATGAAGAGC	AGGACGTTCT	CAGGTTCTAG	GGCTTCCAGA	ACGTGAAGGA	4140

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CAAAACACTT TACGGATTGT GAAAGTTTTT TGGGGGCTTG ATGCTCCGTT GGCACAGCGA	4260
CGTCATTTTC CTGCAATTAA CTGGCTTACA TCTTATTAC TATATAAAGA CAGTGTGGGC	4320
ACTTTATATAG ATGGTAAGA GAAGACGAGT TGGATATGTA AAATAACTCG TCGGATGAAC	4380
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AGTAATATTC TCACTTTTGC TGATCAGGCA AATCATGCTT TAGAGTTGGG TTCTTACTTT	4620
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TCAGAAGATA GATTAGATGA AATCAAAATT ATATCAAAATG AGATTACACA TCAAAATTCAT	4740
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ATGACTAACT ATTTGTAAGC GTTACGTGAA GTCTCGGACG CTCGCCGTGA AGTCCAGGG	5580
AGACGGAGCT ATCCGGGATA TTTATATACA AATTATCAA CTCTATACGA AAGGCTGGT	5640
CGCTTAGTTG GTAAAAAAGG TTCGGTGACA CAGATTCTTA TTTTAAACAAT GCCAGAAGAT	5700
GACATTAACAC ATCCAAATCC TGATTTAACT GGATACATTA CTGAAGGGCA AATTAATTTTG	5760
TCGCAATGAGT TGTATAATCA AGGTATATGT CCACCAATCA ATGTTTATACC TTCTCTCTCT	5820
CGATTAAAG ATAAAGGATC TGGAGAAGGT AAATCTCGTG GAGATCATCG TCCAACATAG	5880
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AGACCGCTTT AAAGTCCTTT ACTGGGATGG TCAAGGATTT TGGCTACTAT ATAAACGCTT 7440  
TGAGAACGGC AGATTGATTT GGCTAAGTAC AGAAAGGAT GTCAAGACTC TCACACACAGA 7500  
ACAAGTAGAC TGGCTTATGA AGGGCTTTTC TATCACTCCA AAAATATAGT AGATTGAAAC 7560  
TAGAAATGTA CACCTCTGCT TCTAAAACAT TGTTAGAAAT CGATTTTACT GTCTGATCG 7620  
ATTTGCTCTG TTCTTATTTT ATTTTACTAT AAATCCATCA GAAAGTCGTG ATTTCTATTG 7680

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AAATGAGGAC TTTCTTTT TACTCATCTG CTTCACAAA GCACTCTAGT CCATCTCCGA	7740
TTAACGATGG ACTTTATCAC CTCTCTCTCC AGTCCTTGT TAACATCTTG GAGTTGATTC	7800
ATGACATCTT CCAAAGTTA AAGGCTTTA TTCTTAAAT CACGTTTACG AATCTCTTTC	7860
CACACTTGT CAATGGGTT CATCTCTGGT GTGTATGGAG GAATAAATCG AAGCCAAATA	7920
TTAGTCGGAA TCTTTAAGST ACTTGATTTA TGCCCATATG CATTTGCCAT AACGAGTAAA	7980
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CTTNGCTCA GCTTCTATTA TCGCTCACAC CATCCATCAG AAGTTTAACT TGAAGGTACC	8100
CAATTATCGC CAAGAAGAAG ATTGGGCTAG GATGGGTTTA CCAATCACAC GTAAGGAAAT	8160
CTCTAATTGG CATATCAAGC CGAGTCAATA CTATTGGAG CCCCTTTATA ACCTCTTGGC	8220
AGAGAGACTA TTGACTCAGC CCTTACTTCA TGCGGATGAA ACTTCTTATA GGTGCTAGA	8280
GAGTGATAGT CAGCTGACTT ACTATTGGAC TTTTTGTCA GGTAAAGCAG AGAAACAAGG	8340
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CTAGTTCTGC CTATGCGATA GCAGTCCAAG GTTTAGGAGC AAGCGACGC TAAGCTTGGT	8520
AAACTTCGAA CCGCTCGTCT GCTTATCGTC AACTGGAAGA AGCTGAACCT GTTGGATGTT	8580
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AGAAAAGTGC AAATAAGAA TCTCCAGATT AGGAACATAC CGTAGTCTT CCAGTCTGGA	9240
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CGAAACCTA AATTAAGTCT AGAAGACCTT CTATATGCCA CTCTCAATA TGTGCGAGAA	9480

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CGGAGCCAA TGGTTGAAGT AACTCTTGT CAAAGTGGT TTACGATTTC AAGAACTCCT	9600
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GAAATGTTTC AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG	9840
TGGTTATCAA GGGCTCATGA AGATATATCC TCAAGCACAA ACTTCACGTA AATCCAGCAA	9900
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TAATCCTAGT ATTGTAAATT TAGATGAGC AACTAGTGCA TTAGACACTA TTAATGAGGA	10500
AAGAATAACA AAGTATATAC AAGTCAGGG CTGTACTCAA ATAATTGTAG CTCATAGATT	10560
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TATTTCTTTA GGCTTGTGTA ATGGAATAGT ATTGGGTTG CTGATTCGTT ACAAACAA	10860
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CTCAAGTACA GCTGCGGCT CGCTTCCTAG TTGCTCTTT GATTTTCATT GAGTATAAAA	11160
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CCAAATCGTAG TGATTGAGGA TTGAGTAAAT AAATCTTAAA	CAATACCTTG TGCAATCATG	11400
GCATTTGCTA CATTTTCAA GGCAGCAATG TTAGCTCCCTG	CAAGGTAGTC TTTATCAAGA	11460
CCGATGTTTT TCAGATCGT TTTAGCTGTG TTGAAGATGT	TTGTTCATGT GTCCTTGAGA	11520
CGCCATCAA CTCTTCACG AGTCCATGAG AGGCGAAGAC	TGTTTTGGCT CATTTCAAGA	11580
GCTGAACGG CTACACCACC AGCGTTGGCA GCTTTTGACG	GTCCGTAGAA GATACCATTT	11640
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ATAACGCCTT GAGCAACCAA ACCTTTAGCT GCTTCACCTT	TGATTCGTT TTGAGTTGCA	11760
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TCTGTTTTAC CTTTAGGATC GAAGTCTGAT CCACCTTTAC	CTCCACCGAT AGGAAGTTCA	12360
GTCAAGACAT TTTTAAAGAT TTGTTCAAAT CGAGGAATT	TCAAGATCCC TTGCTTTACA	12420
GTGCGGTGGA AACGAAGTCC ACCTTTGTAT GGTCCAACAG	CTGAGTTGAA TTGAACACGG	12480
TAACCAACGGT TTAATTGAAT TTTTCCATCA CGGTCAACCC	AAGGAACACG GAAAGAAACC	12540
ACGCGCTCAG GCTCAGTAAT ACCTGCCAAG ATATTTTCTT	CGATATACTC AGGGGTGTTT	12600
TCAAATACAG GTTCTAAAGT GTTGAAAAAT TCTTCAACAG	CTTGAGAGAA TTCAGCCTCG	12660
TGCCGG		12666

(2) INFORMATION FOR SEQ ID NO: 138:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 3083 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTAAATAGA GCCATTTTGA	60
CCAAAAATCC CGATAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA	120
ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGTCA AAAAGAGGOC CGTCGGATAA	180
CTGATAAGCA GTGCCACAAA GGTACCAATG CCTGCATAAA GCACGTAGGT GAAACTCATT	240
TTAAGATAGG TCAAGTTTTG TGACGCAAG TAAGATTGTG AATTCTCTAA ACTGAACGCG	300
CCTTCGATGT TGA AAAAGGA TTGACCGAAA ATCAAGACCA AGGTGCCAA TACAAGAGAC	360
GCAATCCAAA GCATGTAGG TACTACAAAG AGTTTAGAGC TTGTTTCTT CATCTCTTC	420
CTCCTCGATT GCATTGATCA AACCTGCTTC TTGCTCTTG ATTCTACGT ACTCCTCAAT	480
ACGAGCATCG AACTCTTCTT CGGTTTCATT GAGACGCATG ATGTGGATGT CTTCTGGTTC	540
AAAGTCCAGA CCGATTTCT CACCCAGAT AGCCTACGG GTTGAGTGA TCATCCATTG	600
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GACCTTAAC TGGAGCTTGC CTTCTTCAGG AAGGTAATG CGCAAGTCT CTGACGGAAT	720
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GTTAAATTCG ACCAAGTAGT CCTCAATCAT GGTACCTGGC AAGATGTTTG ACTCCCGAT	840
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GGTGTAGAA TTTCCCTCTT CCAACTCAA GTTGATGTCT TTGAGAACCT TGGTGTGCT	1500
GTCTTCAAAA ACTTTAGAGA CGTTTTTGAA TTGATAAAT GGCTTTTCA ATTGGCATAA	1560
ATTCTTCTT TTTCAATAGT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC	1620
AGGGAGTAAA ACCAAGTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA	1680



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CTTCTCTTTC	AAGCGTAATA	CCTGAGTGTT	CCTTGACTTT	TTGATAAACC	GATTGGATCA	1740
AGTCCTCGTA	GTCTTTGGCC	GTTCATCTG	CGACATTGAT	CATAAATCCT	GCATGCTTTT	1800
CTGACACTTC	TACGCCACCG	ATACGATAGC	CTTTCAMGCC	AGCTTCTGAA	ATTAAC TGAC	1860
CTGCAAAATG	CCCGACTGGA	CGCTTAAAGA	CCGAGCCACA	AGATGGGTAT	TCCAAAGGTT	1920
GCTTGAGTTC	ACGTAGGTGC	GTCAAGGGT	CCATTTCCTG	CTTGATAAACC	TGATGGGTTC	1980
CTGGAGCTAG	GCCAAATTTA	ACTGACAAGA	CAACTGCACC	AGACTCCTGA	ATAGCTGAAT	2040
GACGGTAACC	AAAAGCCAAG	TCTTTAGCAG	ACAGGCTTTC	GATTTCTCCA	TCCTTGOTCA	2100
AGACCTTACA	AGACTGCAAG	ATGTGAGCAA	TCTGCCACCC	ATAGGCCACC	GCATTCATAA	2160
AGACAGCAAC	GCCAAACGCT	CCTGGAATAC	CACAAGCAAA	CTCAAAGCCA	GTTAACTAT	2220
GACGGAGGGC	AATGCGAGTT	GTTCATATCA	AGTTAGCCCC	AGCTTCTGCT	TCAATGGTAT	2280
AGCCATCAAC	AGAAAGCTTA	TTGAGCTTGT	CACACAAGAT	GACAAATCCA	CGAATCCAC	2340
CATCAGCAAC	GATGATATTG	CTTGCAATGC	CAAGAACCAT	CCAAGGGATA	TTTTCTTGGT	2400
TGGCAAAATT	CACAAACGGA	GCCAACTCAA	AACGATTTTC	TGGAAGAGCC	AAATAATCAG	2460
CCTCTCCACC	TACTTTTGTG	TAACTATAGC	TATGCAAGGG	TTCCCTTAAA	CGATATCAAA	2520
TTCCCTCTAA	GATTTCAAGC	ATTTTTTCTC	TTACAGACAT	GTCACTCTTC	CTTTTACAAA	2580
ATTCATTCCA	TTATACCATT	TTTAGAGACA	TTTGACGACC	ATAAAAATAC	CTGTGTTGGA	2640
TTTTGCATAA	GA AAAAGAGG	TTCCCCCCTT	TTTATGATTT	TTTACAAAAG	ATTTCCTTGG	2700
TTCCATAGGC	GACCAGAAGC	AGCTCCAGTG	CTAGAATCAC	TTCAACCAAG	ACTGGATTGG	2760
TCAACCAAGC	TACTTGGAAA	AGAGATGGTG	CCAGATCAAA	GAAGGCATGC	AAGCCATAGG	2820
CTGCTAGGAG	ATAAAATCCAT	TTCTTCTGGC	GAACAGCTTG	GTAACCCCAA	ACTGTCAAAA	2880
GTAATTTGGA	ACCAAGCGCC	AAGATTCGCT	CAAAACCAAG	CAAAATAATC	TGCCAGACCG	2940
AAAGTGACTG	AATGGTTTTT	AACATATTTT	CAGACAGTAA	TTGCAATAAC	TGTGGATTC	3000
GAGTTTGAAAC	TGCCGAAAGA	ACAAATGTAAA	GATTGAGTAA	ACTAGTAAGG	CCTAGAAAAA	3060
TCAACTCCAA	GCCACCATGC	CCC				3083

(2) INFORMATION FOR SEQ ID NO: 139:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 15363 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

CCGGAGGATA	TTGACCACCA	CCAAAAGCAG	GGGGAAATC	GAAATCAACC	AATAGTAGGC	60
TACTGCGACA	CTGGTCAACT	CACATATCTGA	TGCTTGATAA	TAAATGCAAAA	AAGCTTTTAA	120
TAAAGGTTTG	TCTATCAGCT	CTTTCCACCA	CTTTTTCATG	TCATACTCCT	TCACITATAA	180
TCCTTACTC	AATGAAATC	AAAGAGCAAA	CTAGAAAGCT	AGCCGCAAGC	TGCTCAAAAC	240
ACTGTTTGA	GGTTGTAGAT	AAGACTGACG	AAGTCGATCA	CATACATACG	GTAAGCGGAC	300
GCTGACGTGG	TTTGAAGAGA	TTTTCGAAGA	GTATTAACATA	ATTCTCTCTT	ACCAATTCCTA	360
CCATATCATA	CGGTAGGGTA	TTGGCAGCTT	CCCTCAAGCA	ATAGTTCTCT	AAGTTATTTA	420
CATTTTGTGG	TAATTTCTTG	GCATACTTAG	TCGTAATCAA	TGTTTTTCTT	TGCTATTCGA	480
AAATCAACTT	GGCTCCAGA	TAATAGCCTC	TCAGCATTTT	ATCGATATTG	TTGGGTTTGA	540
CACGATTGAT	AACCGTTCG	ACAAAGGCAC	CACCTGCTGAT	AATAGCTGTT	TCTCGAAGAC	600
GAGACTCCTG	CATAAACTA	ATCAAAGAGC	GTCTGTAGAC	TCCCTTCAGG	TTTTCCAAAC	660
TTTCAATAAT	CATCTCTGTA	TTGGCAAGAT	AGAGCTCTGC	AATTTGGTCA	TAATCAAGAG	720
CACGGAGACG	GCTTTGCTCC	TTGTCTTCC	AGCTACGGAA	GGTCTTCCG	AGAGTAAAAA	780
CTTCATGAAG	GAGAAAACGT	AAAATCCTCA	AGGAAACAAG	AAAATAANTG	GTCACTCTTG	840
AGSCAAGTTT	ACGATTGATT	CCTTGTCTTA	TATTTTTCAG	ATAACGTTGG	TAAACTCGGT	900
AAGCAAGATT	GCTAATGTTT	CCCTCTTCAT	AGGCTGTGTC	CAAAACATCA	CTTTCAATAC	960
TAAGAATCAA	GAGTTTCAAA	GCAGCCCACT	CTTCTTGATC	ATCCTGGTTT	TCTTGCCCTTA	1020
AAATGAGATT	TTCAANTACGT	CCATGATAAT	TGTCANTAGC	CGCATAGAGG	GGAAATTTAT	1080
TTCTGGTGTG	TTCCAACTCT	TTTTCCAACT	CTAGCGTTAC	TTCAATTCAAA	ATGGGATAT	1140
GCATAAGATA	ATCCTTGCTT	TCTTCTCTTT	CATCAGAAAG	ATGAGGCAAG	ACCAAGAGAC	1200
CTGTTAAAAA	GCTAACAAGC	GTCAACACCTG	CAACAAGGAA	ANGCAAAAGA	GGATACTCCT	1260
GTTCTAGATT	ACTTGGTATC	AAGAGAATCG	TAGCAATCGA	CACCGTTCCC	TTAACACCTG	1320
AAAAGGTCAA	GAGAAACATG	TCCTTCATAT	ACTTATTTAG	CTTTTTCTTG	AGGCGTCGGG	1380
TTCTATAGGC	ATAATAGCCA	TAGATCATAA	TAAAAAGGAT	GACAAAAAGG	ACAAAGGTAA	1440
GGGCGATTAAG	AGATAGCAAT	AAAAGTAGAG	GATTATAGAT	TGATTTGGTC	ANGATAGGTT	1500
CTGCTATCAT	TTCCAACTCC	ATCCCTAAAA	TCACAAAGAC	AGAACCGTTG	AGCATAAAGG	1560
TCACTGTATG	CCAGACCGCT	TCGGTCACCG	TATCCACTTG	GGCTTCGAGG	AGCGTATTTT	1620
TCTTGAAGCG	ACTTGCCTTT	AAAATTCACG	CAACTACGAC	GGCAATAATA	CCTGAATCAT	1680
GAACTCTCTC	TGCCAGAAAG	AAGTCACTA	GAGGCAAACT	CAATTCATAAT	AAAAGTTTCA	1740

	932	
TGGCAATATC CGTTGCGGCG ACACCTTAGCA AGAAGGATG GAGGAAGCGG TTGTCATGG	1800	
CTCTTAAAAA TCCAMTTAAA AAACCGCCTA GGATTGAAAA GATGAGCGAA CTGCTAGCTT	1860	
GCCCCAGAGA AAAAGCTCCA GTTGTCCAAG CTGTCAAAGC TACCTGAAAA GCCACCAAA	1920	
CAGANGATC ATTCAAGAGT CCTTCGCCCT TAAGAAATTT GGACACGCGC TTAGSAAAGC	1980	
TAAAGCGCTC CGAAGAGAG GCAAGGCCA CCAAGTCCGT AGGACCAAGG GCTGCCCAA	2040	
CAGCCAAGCA AGCTGCCAAG GGAAGGCTGA ACCAAGAAAG ATGGGCCAAG CCACCCAAGC	2100	
TCAGSGTCGA GATAAAATC ACTGGAAATA TGAGATAAGC AATGATTGCG CAGTGTTTTA	2160	
AAATAGCCGT AACATCTGCT TCTTCAGCCT CTCGGAAGG CAGGCTCCG ATAACCAAGT	2220	
CCAAAAACAA CTCCGTATT AAGTGAAAGT CAGTATTGGG TAAAAAGAGA CCAATCACAA	2280	
TTCCCAAGG AATTTCACCC AAAGGGAGAG GCAAAAAGG CAGGAGCTTA TTGGTTGTAC	2340	
TTGAGACAAT CAAAACAGT AAAAATAGGA TGAGTAAAT CAGTAATCC ACGCACGTC	2400	
TCCTTAATCT TTTTACAAC AGGATTCAAA TATCTCCTC TGCTCTTTGA TTTTTGGTC	2460	
AATCTTGAA CAGTCTTTGT GCTCAATTTT TCTCTGCAC CGTTCATTT CAAGAGCAAC	2520	
TAATTTTTTC TTGATTTTAA GCATTTTTTT GCTCATATGC GCTTGGTCTA GCACGCCAT	2580	
CGCTCGTTG TGGTGGGTTG ATTCAACAAA ATTCTGGCG ATGGCATCCA GCTTTTCGTG	2640	
TAAGTATTGT TTATCCATGT CTGTATCTCT CTAATTTTTC AATCATCACT AAAACGGCG	2700	
GGTGTGTGAC TTGGTTTAAA GTTCGGTAAA TGGCAGCTGT GTACTCTTGT TGGTTCAACT	2760	
GGATCACAAA ATCCAAGACA GCATCTCTCT CGAGATCGCC TCCTTCATGA CCATAGTAAA	2820	
TCATAATAGC AATTCTGCCA CCTTTGACAA GTAAGCCACA TAGCTTTTCT AATGCCTCAA	2880	
TCGTTGTCTG CGGTGGGTG ATGACAGACT TATCAGCTGC CGGCAATAG CCCAGATTAA	2940	
AAATCCCTGC CTTAGCTTTT ATCACAACCT GGTCCAGTGT CTCATGGCTT TGCAAGATTA	3000	
ACTGGGCAAT TGTCAGTCA GCCTGATGCA AACGCTCTTG GGTCTTTTCC AAGGCTTGCT	3060	
TCTGAATATC AAAGGCATAG ACTTGCTTGG CTAGCTTGGC TAAAAAAGC GTGTGATGAC	3120	
CATTTCOCAT AGTGCATCC ACTACGACAT CCTCTTTGT CACGACCTCA GCCAAAAAAT	3180	
CATGTGCCAT CTCAGTGGT CTTTTCATTT TCAAACTCCT GPTTTACAGC CTTGCATCCT	3240	
TGAACACTTC CACGACCTCG CATCTCCATC TCAAGCTGT TGAGGACTTC CCATTATTAT	3300	
AGGCTCCACA TAGGACCAAG CAGCATATCC CTAGGCGCAT CTCCTGTAAAT TCGATGGATG	3360	
ACGATATGTT TGGGAATAAT TTCCAGTGG TCACAGATGA CCTGACATA TTCGTCTGTA	3420	
CTCATCAATT GTAACGCCCT CTCATGGTAA TCTCGTTGCA TACGAGTATT TGTCATGA	3480	
TGCAGCAAT GCAGTTTAAAT CCCTTGAATA TCGTTATCCG TGACACAAGC GCGGACATTT	3540	

TCAACCATCA	TCTCATGGGT	TTCAACGAGC	AAACCATTTGA	TCAATGGGA	AACAATCTCA	3600
ATTTTGGAT	ACTTTCTCAA	ACGCTTGACC	GTITCCACCT	ACAAATCATA	AGAATGCGCA	3660
CGGTAAATCA	GOTCAGAGGT	TGCTTCATAA	GTAGTTTGCA	AGCCCAATTC	AACCGTCACA	3720
TGCATGCACT	CCGATAAATC	AGCCAAATAT	TGATGTGTTT	CTCTGGTAA	ACAGTCTGGG	3780
CGGTTCCAA	TATTGATTCC	TACCACACCT	GGCTCATTTGA	TAGCCTGTTC	ATAACGCTCT	3840
CGAATAACTT	CCACCTTTTC	ATGGGTGTTG	GTAATAATTTT	GAAAAATAAC	CAGATACTTC	3900
CGAACATCCG	GCCACTTGGG	GTGCATAAAG	TCAATTTCTT	TATAAAATTTG	CTCACGGAAT	3960
GGCGCATCCG	GTGCCAAT	GGCATCTCCA	GAACAGAAA	CCGTACAAAA	AGTACAGCCC	4020
CCATGAGCCA	CAGTCCCATC	ACGATTGGGA	CAATCAAAATC	CCGCATCAAT	AGGGACTTTA	4080
AAAGTCTTTT	CTCCAAAGAG	TTTTGGATAA	TAATCATTTCA	AGGTATTATA	AGATTTCATG	4140
ACTTTTCATTA	TAACAAAAT	CACCCACAAAT	CTCAAAAGCC	TGACTTTCTT	ATAAATTCCT	4200
CTGTTTCTCG	TTTCATTAG	CCTTTTTTTA	TGATACAATA	TGGGTATGAT	TTTAATGAAA	4260
TTAGCATCTA	TTTTATTATT	GATACTGACC	TTAGTGTCTT	GCATTATCCT	AACCAAACTT	4320
TTTAGATTAA	AAAAACTAGG	ACGAACTTTT	GCGGATTTGG	CTTTTCCAGT	CTTGTATTAT	4380
GAGTATTACT	TGATTACAGC	TAAAACCTTT	ACCCATAAAT	TCCTCCCTAG	ACTGGGGCTA	4440
GCCCTCTCGA	TCCTAGCCAT	TATCTCTGTC	TTTTCTTCC	TTTTGAAAAA	ACGCAGCTTT	4500
TACTACCCTA	AATTTATCAA	ATTCTTCTGG	CGTGCAGGAT	TCTTATTAAAC	CCTTATCATG	4560
TATATAGAAA	TGATTGTTGA	ATTGTTCTTA	ATGAAATAGT	CGAATCCCTA	AGCATTTTCT	4620
AGGGATTTTT	GCTTTCTCTA	CAAAATAGTA	TAGACAATAA	CACATATCAA	TTTTATACAA	4680
AGAAAAGAGT	CTGGGCAAT	AGTCTCTTAT	ATCCAAAAAG	GCAACGGAGT	TGCGTTGTCT	4740
TTTTTGGATG	GTTACGATAG	TCTTGGTAAA	ATAGAAATTGC	CCAATAAAC	ATTTAGAAAG	4800
GCTATCCCAT	GCATATTAC	TATAACACAA	ATCAAAACAAC	TTTACCACCTA	GAAATCAGTT	4860
CCTTCTTACC	ACAAGATCAT	CTCGTTTTTA	CTATTGAAAA	AGTGGTGAAT	ACCTTGGAGG	4920
AACGTCACTT	CTACACCTCC	TATCATGCCT	TTGATCGCCC	GTCTTATCAC	CCTAAAAATGC	4980
TTGTATCTAC	TCTTCTATTT	GCCTATTAC	AAGGGATTTT	CTCTGGTGA	AAAATTGAAA	5040
AATGGAAAG	TTAGTGACCT	TAGATTGTTT	GTTTATTGAC	AGAACTAAGA	TTGAGGCCAA	5100
TGCCAACAG	TATAGTTTTG	TGTGGAAAGAA	AACGACAGAG	AAATCTCCGC	CCAAACTTCA	5160
AGAACAGATA	CAGGTCTATT	TTCAAGAAAG	AATCACTCCC	CTTCTGATTA	AATATGCCAT	5220
GTTTGTATAAG	AAACAAAAGA	GAGGTATATA	AGATCAGCT	AAAACTTAG	CGAATTGCGA	5280

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CTATATGAC	AAGGAGGATA	GCTACACACA	TCCGTATGGC	TGGTATTATC	GTTTTACCA	5340
TACCAAAAT	CAGAAAACAC	AGACAGACTT	TCAACAAGAA	ATCAAGGTTT	ACTACGCCGA	5400
CGAACCTGAA	TCAGCCCCCT	AAAAGGACTT	GTATATGAAC	GAACGCTATC	AAAACTTGAA	5460
AGCTAAAGAA	TGTCAGGCGC	TTTTATCTCC	CCAAGGTAGA	CAGATTTCGC	CTCAACGCAA	5520
GATTGATGTG	GAACCTGTCT	TTGGCGAGAT	AAAGGCTCTC	TGGGGTTACA	AGAGATGTAA	5580
TCTGAGAGGG	AAGCCTCAAG	TGAGAATTGA	CATGGGATTG	GTACTTATGG	CCAATAACCT	5640
CCTAAAATAT	AGTAAAATGA	AATAAGAAC	GGACAAATCG	ATAAGGACAA	TCAAATCGAT	5700
TCTTAAACAT	GTTTTAGAAG	TAAAAGTGTA	CTATTCTAGT	TCAATCTAC	TATACAATAA	5760
GAGAATGACT	CAAAATTAAG	AAGCTAGAGT	TCCACAMTG	GAAATATCTA	GCTTTTTTGT	5820
GGTTGAGAAC	TATTTTGTCT	CAGGCTCTTT	ATCTCTTATT	TAGGACAAGA	GTTTTCTTTT	5880
GGTCTTTAAT	GATAAAGAG	GTATCAAAAT	TTCTAGTCTT	CTTTTTTACC	TTTAGTAATC	5940
ACTAATCTGT	CACCTAAACC	TAGAAGAGTT	AAACTGCTGT	CTACTGCTGC	TGGCTTTGCC	6000
GCACCTACCTG	TACTTGGTAA	CTGGGCTTTA	TTAGTTTGAC	TAGCTTCACT	TGAATCAATT	6060
GGTTTTGTAT	CTGCTTTTTC	TGACACTTGT	GGTTTTTTAG	CTTCTTGAGC	TACTGGTTTG	6120
GTTCCAACCA	AGACGATGCG	GTCTGTGCGA	ACTTCTACCA	CTTCACGGAG	TTTTTCTTCC	6180
TTACTTCCAT	CAGGATTAAT	CGCTGTAAAG	ATACGTCTCT	TTCCAACITT	TCTTCTTTGT	6240
TCTACACGAG	TTTCACTAGT	ATACAGTGTT	GAATCTTTTT	TCTCAACTGT	CTTGATGCC	6300
AAATCTTTT	CAACAAATC	GATTTTGTGA	AGATCTTCTT	GTACAGCAGC	AACGTCTCTC	6360
TCAGAAACTG	GTTTTTCTCT	AGTCAAGTGG	ATACGCTATT	CCTTGACTTG	TTTTCCACTT	6420
TCTGAAACGA	GGCGAACAG	TACTGGAAAG	CTATCTTCTC	CACTATCTAC	CACAGTTGAA	6480
GCTACTTGAT	TGTTTTCTTC	AACGTAGACT	TTTGGCCGTT	GACCTTTTATA	GCTAATTGGA	6540
TAGTCTTGAC	GATTTTCAGC	GAAATCAGCA	AGTCTTTTTC	CATCTACAAG	AATCTTTGAT	6600
TGAGTGCTTT	CTTGAGGCCA	TTCACTTGGT	GCAAGGAAG	TCACTCTCAAT	CATCGCAACA	6660
CCGCTCTTAT	CTGCTTTTACG	CTCCATACGC	CATCTCATAG	CTTTGGCTTT	GATAGCTTTA	6720
AATGTTTACGT	TGATTTTATC	ACCAGCTGCA	ATGCTTTTAT	CGGCACGATA	AGGAACAGCT	6780
TCCCAATTTT	CTGGATTGTT	GAATGGATGG	TCTGCGTGGT	AGGCTTGATA	GTTTGAATAG	6840
TAGGTTGGCA	CTTCAAACCT	TGAGCCGACA	TAGCGTTCTA	AAACGAGTTT	AGATGGTGCA	6900
TCCGTACCAC	TATCTGCAAA	GAACGTAACT	TTTCTTTGTG	TAAACAGTCCG	TTCTACAATC	6960
TTACCATTTT	CACGGAATAA	CACACCCGCT	GATTACTCTG	GATTAGAAGA	TGGTGTGTGT	7020
GACCACTTTG	TCCAACGAGC	ATTTTCTGAA	TGATCTCGGT	CATTGAGATA	GTCAACGCGG	7080

TCATGAGAGT	TTTGTCAAT	ATCATTGGTT	GCTGAAGCAA	AGGCGTGGT	ACTGTTTCA	7140
TCATAGTTAG	GTTATCTGA	AAGAGTCTCA	CCAAGTTGT	CTGTCACTCG	TACAGTGATC	7200
TCAGCAACAA	GTTTACTACC	AAGGACACGG	CCTCGAACAG	TAAATTGACC	TGCTTTTGTG	7260
AGATTTTCCG	CTGGAACCTC	TTCCCATTTCA	ACTGTACAGT	CTTTTGTTC	GTAGCCGTCT	7320
TTACCTGTGA	AGTAAACTGG	AACCTTAGTC	GGCAATTCAA	GTGCTTGACC	TACTTGTAGC	7380
AAGCGAGCTT	GTTTAAACGG	AGCAACTGGT	TTATGAGAAA	GTAAGCTCTT	ATCCTTAGTG	7440
AAGTGACGAC	GGTATTCTCC	TAAAGTGTCC	CCATTTTTCAG	CTTTCGCGAT	GACACGAATC	7500
GGCTCACCTT	CACGAACGCT	TGGAAACGAC	GTAGCGAGAC	CATTGTGCT	AACACTTGCT	7560
GTGACTGCCG	GAACTTTCCC	ATCTACAGAC	TCAAGGTAGT	AGTCTGTCAA	ATCAGGGTTG	7620
AAGTTTCTCA	AGCTTTTGGC	GTCAACTTGG	ATTCTTGTCT	GTCTTGTGCT	GGCTGCCGCA	7680
ACTTGTTCGG	CAAAGATTTC	TACCTCTGTG	ATAGACGTTT	CACGCTTGT	ATCTGCTTTA	7740
ACCATGCCAA	TACGAACAGC	ATAGGTTTCA	ACTTTATCAA	AGCTAAAGTG	GTTCATTCTT	7800
CCAGCCTTGA	GTGAGCAGG	GGCTTTTAGA	TTAGTAACTG	GTTTCCAGTT	GGCAGAATCA	7860
TTAAGACAT	GCTCTCATTT	ACCAACAAAA	CTAGGTTTTC	TAGGACCTGT	TGGGACAGTC	7920
TTACCAACAT	AATACTCAAT	CACATAAGAC	TTGCTACAC	CAACTCCATG	GTCTTTCATGG	7980
AATCCGACAC	TTAGATTATC	AACGGAGCGT	TTGCTCAAGA	TACCTGAATC	TCCAACACAGA	8040
ACACCGACTG	AAGCTTCTGG	ATTAGTACGA	TTCCAGTTTG	TCCAACGAT	GGCTGGTTGG	8100
TTATTGTAGG	AAATGAGCTT	GTCAATTAACA	TTTGAAACTG	GGTGCCTTGG	ATTGTAGTCT	8160
GAAGCAAGG	CAAGTGGCAA	TTCTGAACCG	GTCCATTGGT	CAGAAATGTT	TGCACCTTGC	8220
TCAGTTTGAG	CAGATACGCG	AACATGAAGT	TTAGTTGTTA	ATTGCGTACC	TTCTAAGCGA	8280
CCATTAACTG	TAAAGACACC	TTCCCTTAGCG	TATTGCTCTG	GACGAATGCG	ATCCCATGCA	8340
ACCTTAGCTG	ATGAACGCTG	ACCATTTGAA	TCATATGTCC	GAACACTTTC	TGTAATTTGT	8400
GGTGCTTCTG	CGATTGGAGT	TGTACACATG	ACTTCTTCAA	CTGAAACGAT	ACCTTCTACA	8460
GAGACTTTTG	CACGCGCTTC	AAGGTCAATT	CCTTCAACTT	TACCTAGTAC	TTCAAAATGTT	8520
TGATAGGAGT	CTAGTTTTC	TTTCGGAATA	GCTTGCCAA	TGACTTTATG	AGTTTTAGGG	8580
AAACCTTTGT	CATACTCAAC	TGTTACTGTT	GCTGGAAGAC	TTGGTTCCCTG	ATGCAAAATC	8640
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GTGAGTTCAA	CTTGGTCTTT	AGCTCCCTCA	TATTCAGCGT	TCAGAGTGAC	TGCTCCTGTC	8760
TTATGCAACT	CAAGCATTCC	TTTACGAATT	GCGACTTCCC	CTTCAACACT	TGTAGAGAA	8820

GTTACTTAT CAGCTGGTAA TACAGCTTGC GTTCCATCTT GATAGTGAGC TCGAACCGAC	8880
AAATTTGACAG TTGTGCTCTG TTTGAGACTG TCAGCTTTT CCACCTGCAA GCTCAAGTGA	8940
GCAATTTTTC GCCTTCTCTC AAGGAATTGA ATTGCATAGG TTTGAAGAGG GCCACCATCT	9000
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ACAGCTGCAT TTTTAGCACT TGCTGTGACT TCTGCCAACT TAGCTCCATA AGCAAGAGTG	9120
CGGTATTGCA TTGGTTTTCG ACTAGTAAAG CCTGTTACTG CCTACACCAC AACCGTTACA	9180
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TGACCTTCTA ANTAACCGGT CGCTTGAATA CGAGAACCCT GAATTGCTAA CTTAGCTTTA	9300
TCTTCTTCGG CAATCTCCCA CTGTCTCACT TCATACTCTT CAACACTTCC ATCAATCAAA	9360
ACATAGGAAA CAGATTGTCT TACAGAATTC AAGTCAGTAT TTGAGCAAT ACGTTTCACA	9420
ACTGTGAGCT CTGATTTAAG AGCAATCACT TCTACACGAG CTCTTACTTC TCGTCCGTCA	9480
GCCATACCTT TCACCGTTAC AATACCGAGC TTGCTCACAT CTACTGAAGA CCAGGTTCACA	9540
GGACGTTCTG CACGGCTACC ATCACTGTAT ACAAACGGAA CAGTGGTAGG CATTTCAGGT	9600
GCCTCTCCAA TAATGGTCTG TACTTTTGGC ACTTCTGTCC CCANAAACAGT CTTCCTTGT	9660
CCTTCTTCTT TACCAGTAAA GACAGTGACT TGGTTCGATT TCAAGAGATC AGAGTGGGCA	9720
GTCAAGGTGA ATTTCCCTGC TTGTTCAAGT GATTTGACAA TGCCAACACC TTTACCAATTA	9780
AATGCTTTAC GAATCCAAGA ACCATCTGCT TGCCTCTTAT AGCGTTACAG GCTGGCTTGT	9840
TCTCCGTTAT CTACACCGAC CAGTTGACCT TGGCCATGCA ATTGGAAGCG AACCAAGATTA	9900
TTAGCAGTTG GAACCAACAT CCCCTGGCTG TCAACAATTT CATAGTAGAT GTAAAGTCAAG	9960
TCTTTTCCAT CTGCTGCAAT CGCATGGTCT TCCTTAATAA GACGAACCTGC CGCTGGCTTA	10020
CCAGCAGTCG TAATCTTATC TCGAGCAATT TCCTTGCCAG ATTCAATCACG AGCAATTGCT	10080
TCCAAGGTAC CTGTTTGATA GGCAACTTTC CATTCAGAT AAAGTTCATT AGCATTTGCA	10140
CCTTCTTGGT AAGTCCGCC ATCGCTGGTT TGTTTTTTAT TGAAGTCTT AAGACCAAGA	10200
GATTTTCCAT TCAAGAACAA TTCTACACTA GAAGCAATTC AATAAGCACG AACTGGAAATC	10260
TTACCTTCTG AGTCAGCTAC TTTGGATGCT AATCTTTTGT TTTCCAGTT CCAGTAGAGGA	10320
AGAAGGTGTA CCATCGGTTT CTCTTAAACA GAAACCAATT GGCCTTGGTA GAGATAGAAG	10380
TCATGTCTTG GAATCGCGC TGATCTACAG ATACCAAAAG AAGAGCTCTT AACAGGAGTT	10440
TGATTTTGGT TGTGCCATGG TGTAGGTTCA CCAATATAGT CCGTACCTGT CCAGATAAAC	10500
TGTCCAGCAT AGCGACGCTT GTCACGGTCA AAAGTCCATG AAGCGGTTGC TGTTTTCCCC	10560
CAACCCACAC GATCATTTCC ATAACTTGAC TGTTCATAAT TACGCTCAGG TCCATTGCTA	10620

TGTTTCAATT	CACGTCAGG	GCGATAGTAA	CTTCCAGTG	TACGGGTAGC	TGAAGATGTT	10680
TCTGATCCAT	AAATCAACCA	TTTTGGATGC	TGAGCTCTAA	GGCTTTGTGA	ATTATCTTCA	10740
GAATAGTTAA	ATCCAACAGC	ATCGAGTTCA	TCAGCAATTT	TCTCATGCC	TCCGTAACCA	10800
TTACCAGAAC	GGAAATTATC	TGCTCCCATG	GTAACATAGC	GAGTCTTATC	AACATCCTTG	10860
ATAACCTTAA	CCAAAGCTTT	AACAGTTGCT	AAAGAGTGGG	CATCACCATT	AGCTTCACTT	10920
ATTTCATTAC	CAATTGACCA	CATGAAGATA	GCAGGGTTGT	TTTGGCTCTT	TTCGACCATG	10980
GTACGTAGGT	CAAAATCAGA	CCATTTTTC	CTTTTTCGAG	CTTCTGGGTG	AGTGGCATCT	11040
TTTTCAAGAA	AACGTCCATA	GTCATAAGGT	TTCTTGCCAC	CATACCACGT	ATCAAAGGCC	11100
TCTTCCTGAA	CGAGTAAACC	TAGTCTGCT	GCAGTTTGCA	AGCTTTGCTC	ACTAGCAGGG	11160
TTGTGGGTTG	TACGAGTGA	GTTAACTCCC	ATCTCCTTCA	TTTGTTTGAG	ACGGGATAT	11220
TCTGCTTTAA	AGTTTCTTTC	TGCTCCAAGC	GCCCCATGGT	CGTGGTGCAA	GGATACTCCA	11280
TGGAATTTAA	TACGTTTACC	ATTCAAAGAG	AAACCTTCAT	TTGGAGTCCA	GTGATAGTAA	11340
CGGTAAACAA	ACAAATCCTT	CTTAGCATCA	ACCAATTGAC	CGTACAGGTA	AACACGCGTA	11400
ATCAATTCCT	ACAAGGCAGG	TTTGTCAATT	AAACAGTCC	AGAGTTTGTG	TCTTTCAACT	11460
TCTAAATTCG	CATCTAGGCT	TGTTGATTCA	TGTGCTTTTA	AGGTACGACT	CGCTGTACGA	11520
ACTAAGCTTG	TTACAGCATG	ACCACCTCGT	TCAACGATTT	GATATTCCGC	TACAAGTTCA	11580
TGCTCTTTGT	CGTCCGATTT	GACGATTTTG	CTGGTCACAT	GAGTTTCAAC	CTTGCCATGT	11640
TGTTGTCTCT	CAAGTTTGTG	TGTTAAATA	GTGTCCCAT	TTTCTCTAAC	ATGCACCTTA	11700
CTGTCTCACT	GTAAAGTCAC	ATCAAGATAG	ATACCACCTC	CTGAATACCA	ACGGCTACTT	11760
GGCTGTTTGT	TGACTGCATG	GACAGCAATC	ACATTCTCAC	GACCATCTTT	TTGAAGGTAT	11820
TTGTGTATAT	CATATGAGAA	CTGGTTATAA	CCATTTGGAT	AAATCCCCAC	TAACGTACCA	11880
TTGACATAAA	CTTGAGATTC	CATGTAGACG	CCATCAAAAG	TAAGGCGAAC	ATTTTCTGTG	11940
AGGTCTTTTT	CATCTAGTTT	GAAAGCTCTG	CGATACCAAG	CTTCCCCACC	GTGAGCTGT	12000
CCACCTTCAT	TTTGTGCAGG	AGATTATGTA	TCGAAATCGT	TAAAGATACT	CCAGTCATAC	12060
GGTAAATCTA	ATTTTTTCCA	CGTAGATACG	TCTGCATCAG	GTTTAATGSC	TTCTTAGTAA	12120
TTTGCAATTGA	GTTTAAAGTA	CCAATTTTGA	TTAAATCCCA	CTTCTCTGTC	TTCAATCAAT	12180
TGATTCACTT	CTTCAATTTG	TACAGCTTTA	GCATCTCTCT	TGAGCGGTTT	TCTTGTATTT	12240
GAAGCTTGTG	ATTCTATCCT	TGGAGCTTTT	TCTTCCGGTT	TAGCAGACAC	TTTTTCTCTT	12300
TTTGGAGTTA	CGGCTTCACT	TTCTTTCTTC	TCAGATGCCA	TAGCCTCAGT	TGAATAGGT	12360



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TCACCTTGTT	CTGTCCCTTC	AACATATATT	TTAGTTTCCA	AAGCTTTATC	AGCCTTTCTF	12420
TCTACTATCA	TTTTTTCTCT	TTTAGGTTTC	TCAGCAGTAT	GAGTAATAAG	TGTTTCATCC	12480
GCATAAACTA	CAGATTCTCC	AGCTATATTT	CCTCCTAATA	AACTGCAAC	AGTCCCAATC	12540
ATTACTGAGC	AAGCTUCCAC	AGCAAACTTA	CGAATGCTAT	AACTCTTTT	CCGATTCCAA	12600
TGGCCTTTTC	CCATAAAACC	CTCCTATAT	TATATTTAGT	GCAGTTAGCT	ACTACCAAG	12660
CCCAAGTGGT	ATACATGGTA	TGCAACCTA	GTTTCAACAA	TTTACACTCT	GCGAAAATCC	12720
AATTCAAACT	TCGTCAGTGT	CGCCTTGCCG	TAGATATGAT	TACTGACTTC	GTCAGTTTCA	12780
TCTACMACCT	CAAAACCATG	TTTTGAGCTG	ACTTCGTCAG	TTTCATCTAC	AACCTCAAAA	12840
CCATGTTTGT	AGCTGACTTC	GTCAGTTTCA	TCTACAACCT	CAAAACCATG	TTTTGAGCTG	12900
ACTTCGTGAG	TCTTATCTAC	AACCTCAAAA	CTGTGTTTTG	AGCAACCTGC	GGCTAGCTTC	12960
CTAGTTTGCT	CTTTGATTTT	CATTGAGTTT	ATATTTTATA	GGAGCGCATT	ATTTTGCTTT	13020
TGCTGCGTAC	TCTTCGTTAC	GTTTGATCAT	TTGTTTTCTG	TACCAAGCAA	AGATACCGAT	13080
ATAGAATACA	AGGAAGACTA	CTGCACCAAG	GATTGCTTTG	ATATCACCAAG	TTGTAGTGTG	13140
ACCAATTGTC	CAACCAAGAA	GTTTTTCGAT	TGGTCCTTCA	AGAGTAGAGT	GAGTAATCAA	13200
TTGAGTTTGG	CTCACACCTT	CTGGGAAGGC	ACCTACACCT	TTAGCAAGTT	CTGTTGCAAA	13260
TGGTGCAATA	AGTGTAACCTG	AAAGAAGGAA	GAGTGCGAAC	AAGAGTGTTC	GGAAGATAAT	13320
CATACGGAGC	AATTTTACCAC	GAGTTACAAC	CAAGAGAGCT	GGAGTAACAC	CCATAGCGAT	13380
GATACCTGCA	AGTGGCAAGA	TACCAATTTCC	AACTTTTGAA	AGAAGCACTG	CTTCAATCAA	13440
CATGATTTGGT	GCAAGTACGT	TGGCACAAGC	CCAGATTTCA	GCACGACCAG	CGATGAATGG	13500
CCAGTCAAGA	CCGATATTGA	ATTTACGTCC	TTGAAGACGT	TTAGTAGCAA	CGTTTGTAAT	13560
ACCTTTGTGAT	AGTGGTCTTA	CGGCTGCGAT	GAACCATGAA	CCGATAAGTG	AGAAGAGTTC	13620
CAAAGATACA	CCGGCAGTCA	AACCAAGAGA	CAACCATCTT	TTGATTAACAA	GACGCCATTT	13680
ATCTGCATCT	GCAACACCTG	CAATTTGGATG	TGGAGTTCCC	ATAATACCGA	TAACGATACC	13740
AAGGATGAAA	CCGATGAAGA	ATTTAGATCC	CCAGAAACCG	ATTTTCTTGT	TCAATTTAGC	13800
AGCATCAAG	TCAATTTTAT	CAAGGCCCTG	GAAGAAATTT	TCAAAAATCT	TATCCAAAAC	13860
CATGATAACT	GGGTTTATCA	TGTAGTTTAT	GTGAGTTGAT	GTCATTTGCT	ATGAATTTGG	13920
GCGCTTAAGA	AGGTATCAAA	ATGTAGGTTT	CATCAAGTCA	GAGTTGATTA	TTTTCAACAC	13980
ACCGACAAGG	ACGATAGCTG	CTGTAGCAAT	AAAGAGTGAA	ACCCCTTGAC	TCACACCATT	14040
GTTATCAGCA	TACCATTTAA	TCAAAGAGACC	TGTGATAGAC	AAGTGCCAGA	TATCAAGAGT	14100
ATCCACATCA	AGTGTATCTG	TTTTCTTTCAT	AGCTAGCATC	ACTATGTTGA	CAATCAACAT	14160

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GATGAGCAAG	ANGTATAGTG	TCCAAGCAGA	ACCCCAAGTG	ATTGTAGCAA	GTGGTGCCCA	14220
ACCAACGTCG	GTAACTACTCA	ATTGGATACC	AGTGTTTTCA	ACGAATTTTG	CTAGTGATGC	14280
TGAGAAACCA	CTGTTTAGCA	TACCGATGAT	AGCACCGATA	CCTGTAAAGAG	CGATGGCAAG	14340
TTTGATACCA	CCTTCAAGCG	CTTTGGAGAA	TTTCACTCCA	AAAAGTAAAG	CCAATACTGT	14400
CAAAATGATT	AACATGATGA	CAGGTCCACC	CATTCTAAG	ATGGGATTGA	AAACCTTTCC	14460
GATTAGTGCA	AAGATTGCAT	CCATAACAGT	TCCTCCCTTT	TTGATGTTAT	ATGAATGTTA	14520
ACAAATTAGA	ATTAGCTTAA	TCCGTGTTCT	TTAATAGCTG	CTTCAATATT	GTCAAACTACT	14580
GGAGCGCTCA	TTCGTGGGAT	ACGGAATAAG	ATTGGCCAG	CTTCGATAAC	TGGGATACCT	14640
GGTTCAAAC	CAAGGCTGTG	TGCAGCGATT	GGGTAAAGA	TATCGTAACC	TTTCATAAGG	14700
TCTTCGTTTA	CATCTTTCAC	CATGACTGCA	TCACAGTGAA	CATCATAACC	ACGGTTTGAA	14760
AGTTCTTCTT	CTAGAGCACT	TTTAATTTGG	TGACTTGAGT	TAACACCTGC	ACCGCAGGCA	14820
GCAAGAAATT	TAATCATTTA	GATTTCCTCC	GATTTTATTT	TTTAATAGAC	AAGATTAAAG	14880
GOTTGCTTCA	GCAATGTAAG	TATAAAGGCG	TTCTGGTTCA	GAAATTTTGG	ATAGGCTCTC	14940
AAGATGACCA	TTTCCTGTGA	AGAAGTCCAT	TAACGTAGCA	AGAATGTTTC	TTTGACTTGA	15000
ACTTGAAATTA	TTAATGATAA	AGAAGACTAG	CGATACTTCT	ACTTCCTTAT	CAGGAGCTAT	15060
CATATTGTGA	AAAGTTATFG	GTTTTTCTAA	TCGAACAACC	ACCACCTTCT	CAGCTAGATT	15120
ATGAACAATA	TCTGTGTGAG	GAATCGCTAC	ATTTGGCAAG	TCCTTTCTTA	GAATTTCCAT	15180
ATCTAAACCA	GTTGGAAATG	ACTTTTCACG	CGTGATCAAG	GCTTCACGAT	AAGTTGGAGT	15240
GACAATTTCT	COTTCCTCCA	ATAAAGTTGC	AACCTGATCA	AAGAGTTGTT	CTTGACTATC	15300
CGCTTCTAAG	CAAAACACAA	GGTTTTTGTG	AAAGAATAAA	TCTAATACCA	TAAGTTTTTC	15360
CGG						15373

(2) INFORMATION FOR SEQ ID NO: 140:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 28882 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

TAAGACTATT	TAATAGTGA	CTGAATAAG	ATACGAACAA	ATTGATTAGG	AAATCAAA	60
GAATTTATAG	AAATCTTTA	GCAGTTATGT	TATCCTATT	CTAGTTTCAA	ACGCTATAGA	120

940	
AGCAGCATTTG TGCTAGTCKA GATTCACTTT ACTATACTAA AACGAGTAGC TTGAAATCAA	180
AAACCCACC CTCACAGGCA GGTTTTATCT GTATTATTTA GCTAGATTAT GCTTTACCTT	240
CTGAACCGAA TACGTGATA CGTTCTTCAA CGATGCTTG GATAGCTTTT ACACCGTCAG	300
CCAAGAATTT ACGTGGTGG AAGAGTTTTT TCTGTGCTA TTCTGCTTGG TTGCTTGGT	360
AGTCAGGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTTCT GTGTAAAGT	420
TAACTTTGGC AACACCAAGT TTGATAGCTG CTGGGATTTG CTCATCAGGA ATACTGTATC	480
CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTCG AAGTGTGCAA	540
GGTCAAGACC TTCCAGTTT ACTGGGTAG GACCGTGAT GTTACCGATA CCAGCTGCCA	600
AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTACCTT	660
TACCGATGAT TCCATCTTCT TCACCAACGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC	720
CTTTAGCGTG TGCTTTTTC ACAACTTCTT TAGCCAATTT AAGGTTTTCT TCAACTGGAA	780
GGTGTGAGCC GTCAACATG ATTGAAGTAT AACCACTTC GATACACTCA AGTCATCTT	840
CGTAGTTGCC GTGGTCAAGG TGGATAGCTA CTGGTACAGT GATACCCATT GATTCAACAA	900
GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG	960
AAGTTTGGAT CAAAAGTGA GCTTTTTTAG CTCTGCTGC GCGCAGATA GCTTGAGTCC	1020
ACTCAAGGTT GTTTGTGTTA AATCCACCAA CTGCATAACC GTTGTACGG GTTGTCTGGA	1080
CAAAATTTTC TGCTGAAAG ATTGCCATT TATCAGCGCT CTTGTATATT TTTATGGGTC	1140
ATCCCATTTA CATTTGTCAT TTTATCACTT TTGCGAATA AAATCTAGTT TTTCCCGCAG	1200
TTTCGATTGA TTTTCTCTA ACTCCATCTA TGTAACCCCT TTCTCTCCCT AGTCCTGGAG	1260
GACTTTTGGG AAATCTATAA AGAAGGTTAA ACTATTTCTC TCCATCTCGA AACGATAAGC	1320
TAATTTTTC TGTCTAATA GACTCTTAAC CACAAAGAGC CCCATACCAG ACCCCTTGAC	1380
CTTGCGACTG GCATTGTGAG AAAAGACTG GGCTAGTTTT TCTGTCTCT CTGAGCTACA	1440
GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCATTT CGAACTAAGC CACCTGGAAC	1500
AGAGTGCTTA ATGGCATTC TGATGAGATT AGAAGAATC AACTTCATAA CTGATGGGTT	1560
TAGATAAGCC TGCTGATGGG TCAAACTATT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG	1620
CAAGGCATAA CTCTTGACCA GATTTTGGGT CATCTGGAGG AGGTCAATGT TTTCCCTATC	1680
ATCTCGCAAT TCTGTACAG AAGAGAGGGA AAGTATCTGC AGAACATGOT GATTGAGTTC	1740
ATCCACATC CCCAAGGCAA CTCCAGATA CTGGTCTCTA TCTTTATAAC GACCGATATT	1800
CTCTCTCATA TTTTGGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCTAGAGA	1860
AGCTCTCTGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGGCTT CATTTCTTTC	1920

ATGCAAGTCC	GCAATAACAG	TCAAGAGATG	CTGGTAGAGG	CTATTGATTT	GTTCCTTGAG	1980
ATTACCTATC	TCATCCTTAG	AATCCACGGC	CAATCGCACT	TGGGAATCCA	GGTCCATCAT	2040
CGGACGGGTC	ACCCGCTTGA	TTTCCAAAAT	CGGTGCAACA	ATAGTCCGAG	CGTAGATGTA	2100
GGCCACCAAA	AGGGAATCA	GAAAGGAGCC	CAGCAAGTA	TAGGGAAGAA	ACTGGAGACT	2160
GATTTGCTCC	GCTTCCTTTT	GTAATCCAT	GGAAGCTAGA	AACTGGAGAA	TCATAGTACC	2220
ACCGTCTGCG	GTTTTCACCT	CGCGCTCCTC	AATAAGAGA	GAGGTTGTCT	GGCGGCTCTG	2280
TGCCAGAGGA	AGACTGTCTC	TGACTTCTAA	CTGTCTCCTG	GTCTATCTCAC	CTTTGACGGT	2340
CCCCTTGATA	TCACTAGTCT	GGGAATACAA	GTCTAACACT	TGCTCGATAC	TCTGCCTATC	2400
TTTCCCTTCT	AGGGACTGGG	CAATGGCTGT	TGCCCTTTGA	CCAATGGTTT	CCTGACGATG	2460
ACTCAGATAA	GTGGAAGGAA	AAAGAAAATA	AATAGCTAAA	TGAAGGCAGA	TAACCAAGAC	2520
ACTAAATATC	GAGAAGGTAT	AGATAAATAT	CTTTGCAAAAT	AAACCTGTTC	GTTCATTTTT	2580
CGCTCCAAAT	TATAACCAAC	ATTGCGCACA	GTGAGGATAC	AATCCAAGTC	TAGCTTTTTC	2640
CGCAATTCCT	TGATATAAAC	ATCAATAACA	CGGTCAAAGG	GAACCTCATC	TGTGCTTTTC	2700
CAGACGGCAT	CGATAATCTG	AGATCGAGTC	AAGGCCCGGC	CTTCATTTTT	CACTAGATAG	2760
TCCAGAAATTT	CCAACCTCTT	GGCATTGATA	GGCACTCTTT	GACCTGCGAG	GCTTGCACATG	2820
TAGCTTTCAA	AGTCCACCTT	GGTATCCTTG	TAAAGAAAAG	TTCTGCTCGT	ATCGTAGTAG	2880
CGCTTGAAAA	TCGCGTCCAC	CCTCACTTTT	AAAAGGGAGA	GGGAGAAAGG	TTTTTCCAGA	2940
TAGCCATCTG	CCAAAGAGGC	AAAGGCACTC	ATCTTGATTT	CCTCATCTTG	AAAAGCTGTC	3000
AACATCAAGA	CAGGAACCTG	ACTGGTTTTA	CGAATCTCAG	CTAGGACTTC	TAAGCCGTTG	3060
AGCTTGGGCA	TCTGGATATC	CAGTAAAACC	AGGGCCACCT	CATAGCTAGA	AAATTGCTCC	3120
AGAGCTTCCT	GACCGTCCGC	TGCCCTCAATA	GTTCCTATGC	CACAATCCGT	CAATAATCA	3180
CTGACCCCCCT	CACGGATCAT	CTCTTCACTC	TCTACAATTA	AAATTTTCAT	ACTTTAACTG	3240
CTCTCTATT	TTTTTTTTTC	TTAGAAATAA	TACTTACCCT	ATTTTCTATT	ATAGTCTCTT	3300
GCTGGCCTTT	TGTCTGCAAG	CAACTGACCA	CTAGATAAAA	CGTTGTGAJA	TTCTTTCTCT	3360
ATPAACTCCA	TAACTTTAGT	ATATTATATT	TAAGCACTAA	AGTACAAAAG	AAGCAACTGA	3420
AAGCAATGAT	TTTCACCACT	GCTTTCGGAT	TTATTTTGAA	TTGTTAAATA	GCCATTCTCA	3480
TCCACTATT	TTGAATAGAA	ACACAAGATG	CAATCTTTAT	TCTAGACTCA	TTTTTTCAAA	3540
TTTATTTCACC	ATCCAGCAAG	AGCTCTTTTG	GTGTTTTTCT	AAGGAGATTG	CTTGAAGCAA	3600
GGCCATAAC	GAGAACCCT	AGAACCAGG	CAAGGACAAA	AATGATGATA	AAGTCTGATG	3660

TCTGAATGGA AATGCTTAGG CTCGACAAGG TCTTGCTAAA GCCATCTACT TCTGCACCAC	3720
CACCAAGGTT AGAGGCTTGA GCCGCCTTAC TAGCCTGTTT GGCAACACCT GAAGTCACAT	3780
TGGCAAGGAC AGTGTCTCCA ATTGCACGGG CAGTGTAAAT AGTCAGGAAG TAAGCAGAAA	3840
CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCTT	3900
GCTTGAAGCC GATAGAGAGG AGAATTCOCA CTTCCTTGCG ACGGCGCTTG ATCCAAAGGC	3960
TGAGCAAGAG GGCAMGGAGG AGAAGTGAAG AGCTCAAGCT ACCCCAGAAAG AGGAGGTTGG	4020
CCATCTTGTA CATACAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTTGA	4080
CGAGTGTGTA GCTCTCCAG TTGATACCAC TGATGCCATT CAATCTTTTC ATAACATCAT	4140
CCAAGTCTCT GTCTGCTGTT ACAAGAAGG TTGCGTCCCC ATAAATGGCT GTGCTTCTG	4200
TGTATCCATA AAGTTTTCGA GCACTGTGAA TGCTGTAAAT AGCTGTGTTT TCGTAAAGTT	4260
CTGTGAGATA GGTTCAGTCT GACTTATTAT GACCATCAAA GAGTCCCTTG ATTGTCACTT	4320
CAACTGTTCCT CTGGCTCCT TTTTCATTAT CTGCATGTA GATATTAGAG TCCAGTTTAA	4380
CCPTGTGCCC TACTTCCAG CCGTGTTTGG CTGCCAAGTC CTTGTGCAAG AGGATTTTAT	4440
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AATCTCCGAT AGCGTTGATA CGTTTGACAT AAGACTCAAT GGCTTGTTTT TCGGTGATTT	4680
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GATTGATTTC CATGGAGAAG CTAATGGTGA TATTTTAAAG GGTCTCTTGA GAAGCCTTGG	4800
CAGTAGCTCC CTTGATTGAC AAGCCGACCA AACTCAAGCT CGCATGAGG AGAATAATCA	4860
GGAAAGTAC AATCGATTTC AAAAACTTCC TTGTAACATA GGCAAAATGCG TTGTGTAACA	4920
TAGATTCCCT TTCTAGATTT TGTTPPAATC ATTCATTAA AATAAGCTCA AATATTATAC	4980
TAGTATTGCG CGTTTCAGTC AGTTTCTTAT CCTTTAATTC AAGTGTAAAT TCTGACGCTT	5040
GTGCCACTTC TTTACTGTGA GTTACGACAA TCACACATTT ACCTGTTTTT TGGGCAAGTG	5100
ATTTGAGTAG TTGCAATAA TCTCCAGCAG TTTTAGGATC CAGATTTCCT GTTGCTCAT	5160
CAGCTAGAAAT AACTGGAGCT TCTGAGACCA AACTGCGAGC AATGGCAACA CGTTGCTGTT	5220
GACCAAGTGA TAACTGAGGA ACATTCGCTT TGATCTGGCT TTACTCCAAA CCAAGCTCAA	5280
GAAGTGATAT CTTGCTTGCC TTTTGTGTA CCAATCGGAT ATTTTCCAGG GGAGAAAGAT	5340
AATCTATCAA GTTATATATT TGAAAGACCA GGAATATATG GTGCATGCCA TGTAAAGAA	5400
AGCCCTCTCT ACGAATATCC TCTCCTTGAA AAAGGATAGA ACCTTCAACA GGACTATCTA	5460

GACCAGCAAG TAGGACAAG AGTGTGGATT TTCTGTCTCC TGACTCCCCA ATAACTACTGT	5520
AAAAATTTTC GGGTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT	5580
TATAACGGTA GGTAACATCT TGTAAATGTA ATAAAGTCAT GATTTCCTCT TCTTAACATA	5640
TAGATGATAA AATTCTTTTC GGTGATTTTC TAAATAAGAA TAGGAACCAA ACGGCTACAG	5700
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ATAAACTGCT TGCTTTGGCT AGTGTATCTT GTAAGCTTGC CTGATCTCCA CTGCTAGTA	5820
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CAAGAGATAC CAAAACATC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC	5940
CAAGTGCAAG TAAAAATCCC ACTTCATAGA CCGTTCTCT CAACACAGAA GACAAAACCA	6000
GAATTAAAGC TCCAGCTCCT GCTATCAACA TCCCATAAAG GAAGATGGTC AGGAAGGTTT	6060
GGAAAGTGC AACTGAGTCT TTGATTTGTT CAAAAGCCTT GTTTTCCCTT TCGACTTGGT	6120
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GATTTTCTAC ATAGAAGCGT GCTGCATGTA CTTGAGCTTC ACTATTGCC AAAAGGGTTT	6240
GGCTACTTTC ATAGTCTGTA AAGACTTGAT TTTCACTGAA GTCAGAAAGC AAGCCTGTGA	6300
ATTTCTCTTG TTTTTTACCA GAAAAGATGC CGATAATCTC AAATCTTACT GTTTGCTCTT	6360
TTCCAGATTG AGACTGACCA GCATCCAAAG CAATCTTTGC ATGAAGCGAA AGACCGTTCT	6420
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CTTCTTTTAG ATTGAAGCC GAATGGTAA AGGTATACAT CTTGGATGAA TCTTCAAGAG	6540
CCGTTAAGCT AACCAAGTTA TTGTCTGCAG CTGATAAATC ATCAGCTCC ACGCTCTGCT	6600
GGCAGTCAAC TGCTTCCTTG TCTTTTAGTT TTGGCAGCGT CTCAAGTTCA GGAGAGACAT	6660
TTTTCAGCCC CTTAATCTTG CTTACAGATG CTAGGCTGTA CAATCTGAAT GTCTGACCAT	6720
TCTCTATCTT CTTAATAGAA AAAGATGTAT TGAGTGATTT ATAAAGATTG CTTTCTACCG	6780
TTTGTGTTGA CTTTCATAGA GTCAACACAG CTGAATTTCC GGCCAATAAG ACCAATAAAA	6840
TCAGAAATAA AATAAAACTT CTCAGTCGCT TTCTGTGTAC ATAAGCCCAA GATCTTTGGA	6900
TTGATTTTAT TTGTCACTC CATATTTGTA AGACTATTAT AAACCCCAA TATGAAATAT	6960
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CATACGTGCC GTTCGGCATA CGCGCGTTCA ACTAATTTTT AACGCATGTC GTTCAAGGTA	7080
ATAATCCAAA CACGAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT	7140
AAGTACCGAC TCTTGAGCTA CTATAGTAGA TTGAACCTAG AATAGTACAC CTCTACTTCT	7200

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AAAATATTGT	TAGAAAACGA	TTTGACTGTC	CTGAACAATT	CGTCTATTC	TTATPTCAAT	7260
TTACTATAAT	TGATAGTGGT	CGCCCCAGCC	AGATAOCTTA	TCTGCTATCC	ATTTAGGAAC	7320
CCCTPACTTA	AGCAATCCCC	ATAATCGTCT	CGATTCTTC	TTCCATTGCT	TCCAGATAAT	7380
CACTCGTAGG	CGGATACGCA	AGCGCTCATC	TATGCTAGTG	ACTATACTTT	TCATATTTAT	7440
AATTCATTCC	TTTCGTTTCA	CTCAAGGCAC	AACACAGAA	GAAAAAGTGT	TGTGATCTTT	7500
ATTTTGTGTT	ATAATAATAG	TGAGAAAACC	TATCACTACT	ACAAATCACG	GGGAGGTGAA	7560
TAAGTGAGTG	GTACAGCCAC	TACCTCGCAT	ATTTTGTAC	ATCATTTAAC	GGTACATAAT	7620
AAGTTGTACC	ATCTGAATAA	GTGCTACAA	TATCATTTGC	ATGCTCTCCT	TCACCTTTAG	7680
CRAAGGTGG	AGCTCCTGCT	GGATGATTTT	TATTTGCCT	TTTCAATTTT	TCATPAATGG	7740
CATTTTCTCT	GTATCTTTTA	TATPATCAGG	ATTTTCACT	AAGATTTTGT	CTGGATATGT	7800
CGGTTAGCA	GAAACAATTT	TTACTGTTAC	TTCTTTTTTA	TTGGAAGCAC	TTGTCCAGTT	7860
TCCAGCATTA	TCTTTAGCAT	TTAATTTTAC	AGTAATTCCT	GAACTAGGAA	CTTCAGTAGC	7920
AGGTTGATTA	TCAACATTAT	TCAACTTTAA	TTTCAAAAGA	GCTGTTGCAT	CAGACGTTTT	7980
ATCAATCGTT	ATATATAATG	ATGAATTGTT	ATTATAAAC	GTCTCTTCAT	ATTTAGCTGT	8040
TTGTGAGCTA	CTTGAAACAG	AACGTGAAAT	ATACCCACTA	CCTCCCTGAT	TATCTTCAAT	8100
GCTTACGTCT	AAATGAACCT	CCCCACTATT	ATTTGCTTAA	GCAACAACCTG	TTATAGTAAA	8160
ATAACATAAA	ATTTGCATAA	ATAGATTAGG	GAAATCAAG	CAGCTTCTAG	GAATGTTTTA	8220
GCAGTCACAG	TGTACTPTCC	CAGCATCAAG	CCACTATAAC	TCTGCACATA	AAAATGGAGA	8280
AGATGGCAAT	CCTCTTCTCC	AAATATTAA	TTCTTTACAA	ACCAACTATA	GTTCAGAAA	8340
AACCTAAAAT	CAATTGATAA	CACAAGGTCA	GGTCGGTCAA	CTCTTTCAAC	TGAAGCCCTG	8400
TCAACTCTTC	CCATTTATCA	ATCTTGTAAT	GGAGAGAATT	GCGTGCAGA	TAGAGTTGCT	8460
GGGCTGTTTT	AGTGAGAAAC	GCATATTATT	CCCAAGAGA	GAGAATGATT	TCCTGAATCT	8520
GATCTTGATC	CAAAATCATC	TGGGTGAGAC	ATTCCTTGAT	TGGCTTCAAG	TCCAAGAGTC	8580
TTTCTCCCAT	ACTCAAAGA	TAGAGCTGAG	AAAAAGTATG	AACACCTTGG	TGACCTTGAC	8640
GCCACCATGT	CTTGACAAA	TCCCGCTCAG	CTTTGATTA	GTCTGATAGG	GCTTGATGTC	8700
CCGCTGAGA	CCAAACCTGA	CCCAACATGA	TAGAAAGACG	AAGTCCAAAG	TCATACTCAA	8760
CCGCTTCAAT	CGTATCAACT	AAAATATCTC	TTACAGAGAT	GTAATTTGCT	TGTTGAAGCA	8820
CGAAACATA	ATCCTGAGCT	CCGACCTGTA	GCACGTGCTG	ACAATTCGGA	AAAAGAGTCC	8880
GCATCATATC	TAGCCAAGAA	GCCAGATTTT	CCTGTGAAA	ATAAGAAAGA	TGGCAATAAA	8940
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CTTCCACATC	AGAGGTATCA	AGCTCACCGG	CTGAAACGAT	ACCTTTACGC	ACCGTCGCGC	22140
CTGCAAGCTC	TGCAATCATG	CTAGCTGCGG	CATCAAGGGC	TTCTATTAACT	GTTCGCCACAT	22200
TAATTCCTTT	TTCAAAGGGA	GAAATGACTT	CAGAACGAGG	GTTCAGGCGA	CCACTTGTCT	22260
TACGGATAGA	TTTGCCATTA	AAACACAGAG	CTTCAAGGAT	AACACGACTA	GATTTTTCAG	22320
AAATTTCTGT	AGCCTGACCA	CCCATAAAC	CGCAAGGGC	TACTGTTTGG	TCAGCAACTG	22380
TAATCAGGAG	GTCTGTCTCA	GCCAAGTCTC	GTTCCTCACC	GTCCAGGCTC	ACTAATTTTT	22440
CACCATCACG	CGCTTCACGC	ACAAGGATGT	CAGTCCCTTC	AAATGTGTCC	AGTCAAAAG	22500
CATGCATAGG	TTGACCAAAG	TAGAGCAGGA	TGTAGTTTGT	CACGTCTACA	ACGTTATTGA	22560
TGGACGCGAT	GCTTGTGTTT	ATGAGAAGGT	TTTGCAACCA	TTGTGGACTT	GGTGCATAG	22620
TCACATTTGTC	CAAGATACGA	GCTGCATAGT	AAGGCGCCTT	GTCTGTCTCA	ATGCTGACAG	22680
AAAGGGCATC	TGCCGACGCT	TCATTAGTTT	CTGTAGAGT	AAATTTTTTTA	AAGTTGACTG	22740
CCTTGTCTATA	GATGGCTGCC	ACTTCCTGAG	CCACTCCACA	CATAGAAAGG	GCATCTGCAC	22800
GGTTTGGTGT	GATGGAAGAT	TCGATGATTT	CATCATCCAA	GTCTAGGTAA	GAAAGACTTT	22860
CCTCACCTGCG	CACGGCATCT	TCAGGCAAGA	TTTGGATGCC	ATCTGCGAAT	TCTTACGAGC	22920
CAACTGAGTC	AGAAATTTCC	AATTCACCAA	GTGAACAGAT	CATTTCCAAGT	GACTCCAAAC	22980
CACGGATTTT	TCCTTTTTTG	ATTTTGTAGT	TATCAGCGAT	ACGAGCTCCT	GGAAGAGCCA	23040
CCATGACCTT	GATCCGACGA	CGCACATTTG	GGGCACCACA	AACGATCTGA	CGCTCTCTCT	23100
CTTCGCCAAC	GTTAATCTGA	CAAAACATGGA	GGTGAGTCTC	TGGCACATCT	TCGCAAGACA	23160

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CGATCCCTGT AGTTGACATT TTTTCAGCCA ACTCTTGTA TGGCACATCA ATGTCCACCA	23280
ATTCTTTTAA CCATTATATA GATACAAGCA TAATTTAGTT CTCCAGAATG ACAGTTGTCA	23340
CTCTAGTTCT TTCTCTTTCC TATCATTTCA ATAGAAGAAT CCTCTCTTA CCTTAATTC	23400
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TACCGGCCCC CATAATTGCG ATCCAACTG TTTTCTTACA TACNTTACAG CCTTCTCCAC	24120
CACACTTGAA GCAAGAAACA TCCACCTCAA CAGATGGCTC TGTGAATGG AAGTAAGATG	24180
GACGCAACCG AATTTGACGC TCTTCAACAA ACATTTTTTG GACAATCAAC TGAAGCGTTC	24240
CTTGAAGATC AGCCATAGAG ATATTTTTC CAACTACCAA GCCTTCGATT TGGTGGAATT	24300
GGTGACTGTG GGTGCGATCG TCCGTATCG GACGGAAGC AGCCCTGCG GAGATCATCT	24360
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AAACGTGAGC GTGACCACT GCAACTGGAC GACCTGGAAG CGTCACATCT ATACTCTGCG	24660
TAGCCAGTTG AGCCGCGACT TTCTTTTCTT CCAGAGCTT AGCTGTTTCT TCAAAAGCAG	24720
CAGTCAAGAC ATCAAGAGCT TCATTGACGT GTTTCCCGAT GATTGGACGC ATCTCAGCAG	24780
AAACATCTTT CATCCCTTG AGGATTTTCA TGAGCGAACC CTTTTTACCA AGGACAGAGA	24840
CACGCAATC TTGCATCTCT TTTTCATTTT CAGCAGTAAT CTGCTTCAAG CTAGCCAGCG	24900



954

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CTCTGATGATA	AAAAGAAAC	CACATGCCAA	AAACTCCACT	CGGAGCGTTG	ACACGCCGTA	25020
CCATCCGTTT	TCATCTGACA	AGTCAGACCT	TCATTTCTAA	ATCCATGCGC	AAGTGAATTC	25080
ACCCAGCTTT	CATATAGAGA	GCTTGCACTC	ACGGCTCTCC	TCCCTGATAT	ACTTCCCTTG	25140
GGCTACTAGT	CTTTCAGATT	CCTATTCAAT	TACTACTTAG	TTTATCAGAT	TTTTACCATT	25200
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ACTCCATGCA	ATAGAACTAC	GAAAAACATT	AAAGCCCAAT	TCAGAAAACA	AGGATATATC	26640
TTCTTATATAT	TTATGATAAA	AATCAATACC	TATCAATTTT	AAGTTATCTT	CTGTAGGATT	26700

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AAAGGCCCAA TGCAATCCAG TCATTAACAAT AAATGGCATA ATAGCACAA GAATAGCTAA	27840
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CAAGACTTTC AACTAATCTC CCCTAATCAT TGCTGGAATG ATTTGGAGTCA TGAACACGAC	28380
GATATACTCA ATGATCTCTT CTAAAAATAT CCCTTTGTGC CCTTGAACAA CTGAATCGGA	28440

956

TTCAAAATTG CCAAGTTTAA CGAATTCCTT ATAATAATTA GCTACATCAT TACCAAGTAT	28500
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ATCATCATTG ACTAAATTTT CATCTTTTAA TTCTAATCTT AAACGTGTTA CACAATGGGT	28620
AACTCTATTG ACATTTTTTT CACCTCCAAT TACATCGAGG ATTTTTCGTA CCGTATCTTT	28680
ATAACTCATG GTATTCTCCT ATTCTATTAA TCTAAATTTT TTGTTAAGCG ACGAATATGA	28740
GCCATCAAAAT AAATAATTC ACTAGAAGTC AGCAATAAT TGTACTCCGT TTGTATAAAC	28800
ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATAAT TATTTTTCAT TAATGCTAAC	28860
AAGTCTTCAT CATCATGTC GG	28882

(2) INFORMATION FOR SEQ ID NO: 141:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 12835 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

GCCTATGTCT TTTTCAAAA AATGCTTGAC TTGAGACGG AACTAGGGAA GTCTAAAGCC	60
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ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTCATT GAGTATTATA TTACTTCTTA	240
TTGTAGGAG GTGGCTTAG AAGATTCCTC TCTTAACTTT TGCAAGGCAT AAATTTGTTT	300
ATGCTTGCT TACTTTGCTT TTCTTTGCTT TGGTTTATCG TGATGTTTG ATGACTTATT	360
TCTTTTTTGA TATTCAATCG CCCGATCTAG CTAATATCGA TGGACAAGCA ATTAAAAATG	420
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CATTTATTAT TCCAATCAT ATTGTTTTGC TAGGTTTTCA ATATATTGAG CTGAAAAATA	540
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CTTTGCAAGT TGCAAGTATC CCTTGTTTGA TAATTTTAGT GACTGTGCTG ATAAATGCAA	660
TTATAACATA TTCTTTTGG ACTTTTCTC CTCTGGATG GAATTTCTTA TTTTCTGATG	720
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TCTTACTAAT CGGTATTTTC ATCAATGCAA TCTATTTTTT ACAATAGTT GATTATGTG	840
GGAATGTGAC TCGTTGGCA ATCACTATT TGATGTTTCT TTGGCTTGGT TCTATGCTGC	900
TTTATAGTGC CTTCGCTTAC TATATGTTTC CTATGACGAG TTTGATGCAA GCTAGCTATG	960

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960

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CTTGAGACTC AAGGAAAGCC GTGACAGGGA ATTGGCAGAT ATTATT"TCAG GGGAGATGA	6540
CCGTATTCTC TTGCTGATTG GTCTTGCTC TTCTGATAAT GAAGAGCGCG TCTGGAA"TA	6600
TGCTGCGCCT TTATCTGCCT TGCAAAAGAA GGTAGCGGAT AAGATT"TTCA TGGTCATGG	6660
CGTGTA"CTCT GCTAACGCTC GTACCAATGG AGACGCTAT AAAGGATTAG TTCACCA"GCC	6720
AGATACTTCT AAGGCTCCAA GCCTGATTAA TGGCTTCAG GCTGTGCGCC AGTTC"ACTA	6780
CCGCGTGATT ACAGAGACTG GTTTGACAAC GGCAGATGAG ATGCTTTATC CGTCAA"CTCT	6840
GATCTTTGGT GATGACTTGG TCAGCTACCA TGCCGTTGGA GCTCGTCTG TGGAA"AGCA	6900
AGAGCACCGC TTTGTGGCTT CTGGGATTGA TGCACCAGTA GGGATGAAAA ATCCA"ACCTC	6960
AGGAAATTTG GCTTTTATGT TTAACGCCAT CTATGCTGCT CAAAACAAGC AAACT"TTCT	7020
TTATCATGGG CAGGAAGTTG AGACATCAGG TAATCCTTTG GCCCTGTTA TCCTCCG"TG	7080
AGCAGTCAAC GAGTATGGCA ATTTATATGCC GAATTACTAC TATGAAAA"TC TACTCCA"AGC	7140
CATTGAACGC TATGAAACCA TGGGACTTGA AAATCCTTTT ATCCTCATTG ACACCA"ACCA	7200
TGATAACTCA GGCAAGCAAT ATATGGAGCA GATTGGAATT GTTCGCCAGA CCTTG"AGAA	7260
TCGTGATTGG AATGAGAAAA TTA AAAAGAC GGTTCGAGGA TTTATGATTG AATCTT"ACCT	7320
AGCAGATGGT CGTCAAAACC AACCAGAGAT CTTTGGTTGC TCTATTACTG ACCCTT"GCC	7380
AGGTGGGAA AATACAGAGC CCTTGGTAGA AGAGATTTAT GTTACCTTGA CAAAATA"AGT	7440
GAAAAGGATG GAGTTGGGGA ATCTCAACTC CTTTGTATGA GAATGATAGT TGGACAGGA	7500
ATTGACATCG AAGAA"TTGGC TTCTGATAGA AGCGCAGTTA CACGACATGA AGGATT"TTGCT	7560
AAGCGTGATC TGACCGCTCA GGAAATGGAG CGCTTCACCA GTCTCAAAGG ACGCAGGCAA	7620
ATAGAAATAT TAGCTGGTGT CTGCTCGCCT AAGGAGGCCT TTTCCAAGGC TATGGGA"AGC	7680
GGCATTAGCA AGCTCGGTTT TCAGGATTTG GAAGTCTTGA ACAAATGAAG TGGGCGCCT	7740
TATTTT"AGTC AGGCACCAAT TTCAGGAAAG ATTTGGCTGT CTATGACCCA CACCGATCAG	7800
TTTGTGACAG CCAAGTGTCA TTTGGAGGAA AATCATGAAA GTTAGTCCAC ATAGACCA"AC	7860
CAAGGCTCTG ATTCATCTGG GAGCTATTCG ACAAATATAT CAGCAAA"TG GGGCTCATAT	7920
CCCTCAAGGA ACGCTCAAGT TGGCTGTGGT TAAGGCCAAT GCTTTATGGT ATGGAGCTGT	7980
TGCGGTTGCC AAGGCAATTC AAGATGATGT TGATGGCTTT TGCCTTTCCA ATATCGATGA	8040

AGCCATTGAA	CTCAGACAAG	CTGGACTCAG	CAAGCCAATC	CTCAATTTAG	GAGTTTCTGA	8100
AATCGAAGCT	GTTGCTCTAG	CTAAAGAATA	TGACTTCACC	TTGACAGTGG	CTGGACTGGA	8160
GTGGATTCAA	GCACTCTTAG	ATAAGGAAAT	GGACCTAACT	GGATTGACAG	TCCACCTCAA	8220
GATTGATTCA	GGGATGGGAC	GGATTGGTTT	TAGAGAGGCA	AGTGAAGTTG	AGCAGGCTCA	8280
AGATTTGCTC	CAACAACACG	GTGTTTGTGT	TGAAGGAATC	TTTACCCTACT	TTGCTACTGC	8340
TGATGAGGAA	TCAGATGACT	ATTTTAATGC	CCAGTTAGAA	CGGTTTAAAA	CTATTTTAGC	8400
TAGTATGAAG	GAAAGTCCAG	AGCTGGTTCA	TGCTAGCAAT	TCTGCAACGA	CTCTTTGGCA	8460
TGTAGAGACT	ATTTTCAATG	CGGTTCTGAT	GGGAGATGCC	ATGTATGGCC	TCAATCCAAG	8520
TGGAGCGGCT	TTGGATTTCG	CTTATGATTT	GATACCGGCC	TTGACCTTGG	AGTCTGCTCT	8580
GGTTTATGTC	AAGACAGTTC	CAGCTGGAGC	TTGCATGGGC	TATGGAGCAA	CTTATCAAGC	8640
GGATAGCGAG	CAAGTCATCG	CGACCGTGCC	AATCGGGTAT	GCAGATGGAT	GGACAAGAGA	8700
CATGCAAAAT	TTCTCTGTCT	TGGTAGATGG	CCAAGCTTGC	CCAATTGTGC	GCAGGGTTTC	8760
GATGGACCAA	ATCACTATTG	GATTGCCTAA	GCTTTATCCG	CTAGAAACCA	AGGTAACCTT	8820
GATTGGCTCC	AATGGGGATA	AGGAATATAC	TGCAACTCAG	GTAGCGACCT	ACCGCGTAAC	8880
CATTAACTAT	GAGGTGGTTT	GCCTCCTCAG	CGACCGTATT	CCGAGAGAAT	ATTATTAGAA	8940
AAGAAAGGAG	TGGAGCATGA	ATCTACATCA	ACCTTGCAAT	GTCTTGCCCTG	GTGTGGGACC	9000
AAAGTCAGCA	GA AAAATACG	CCAAACTAGG	AATTGAAAAC	TTGCAAGATC	TCTTGCTCTA	9060
CTTTCTTTTC	CGTTATGAAG	ACTTCAAAAC	CAAGCAGGTG	CTGGAGCTGG	AAGACGGTGA	9120
GAAGGCAGTT	CTTTCTGGTC	AGGTAGTGAC	TCCTGCTAGT	GTCCAGTATT	ATGGTTTCAA	9180
GCGCAATCGC	CTGCGTTTTA	GTCTCAAGCA	GGGAGAGGTC	GTTTTTGCGG	TGAATTTCTT	9240
TACCGACCCC	TATCTGGCTG	ATAAAATAGA	GTTGGGAGCA	ACCTTTGCTG	TCTTTGGAAA	9300
ATGGGACCGC	GCTAAGGCTA	GTCTGACTGG	GATGAAGGTT	CTGGCTCAGG	TAGAAGATGA	9360
CTCCAGCCT	GTCTATCGTC	TGGCTCAGGG	AATCAGTCAG	GCCAGTCTGG	TCAAGGTCAT	9420
CAAGAGCGCT	TTTGATCAGG	GACTGGACCT	CTTGATAGAA	GA AAACTGCG	CCCAGTCTTT	9480
ACTAGACAAA	TACAACTCA	TGTCCCGTTG	TCAGGCAGTC	CGTGCATGCG	ATTTTCCAAA	9540
GTATTTGGCA	GAATACAAGC	AGGCTCTTCG	CGGTATAAAG	TTTGAGGAAC	TCTTTTATTT	9600
CCAAATGCAG	CTCAGATGCG	TCAAAGTCTGA	AAATAGAGTT	CAGGGAAAGTG	GTCTGGTTCT	9660
GAATTTGGTCT	CAGGAAAAAG	TGACAGCAGT	TAAAGTAAAT	CTTCTTTTTG	CCCTGACCCA	9720
AGCTCAGGAA	AAGAGTTTGC	AGGAAATTTT	AACTGATATG	AAGTCCGACC	ACCACATGAA	9780



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TCGCTCCTTA CAAGGGGATG TGGGGAGTGG AAAAACGGTA GTCGCTGGCT TGGCCATGTT	9840
TGCGGCGAGTG ACAGCAGGTT ATCAGGCTGC CCTAATGGTA CCAACAGAAA TCCTCGCAGA	9900
GCAACACTTT GAGAGTTTAC AGAACCTTTT TCCCAATTGG AAATCGGCTC TCTTGACAGG	9960
TTCCCTGAAA GCTGCAGAAA AGAGAGAGGT CTTCGAGACC ATTGCCAAGG GTGAGGCTGA	10020
TTTGATTATA GGAACCTACG CTCCTGATACA AGATGGGGTG GAGTAGCTC GTCTTGSTTT	10080
GATTATTATC GATGAGCAGC ACCGTTTTGG TGTAGGGCAA AGCGTATTT TACGGGAAAA	10140
AGGTGACAAAT CCAGATGTCC TCATGATGAC GSGACTCCC ATTCACCGGA CGCTTGCCAT	10200
CACAGCCTTT GGAGTATGG ATGTTTCCAT TATCGACCAG ATGCCAGCAG GTCGGAAGCC	10260
TATTTGACAG CGCTGGATCA AACATGAGCA ACTACCTCAG GTCCTGACTT GGTTAGAGGG	10320
GGAAATTCAA AAAGGTTCCC AAGTCTATGT CATCTCTCCT TTGATTGAAG AATCAGAAAG	10380
TCTAGATTGG AAAATGCCA TTGCCCTTATC AGAGGAGTTG ACGACTCATT TTGCAAGCAA	10440
GGCAGAGGTG GCTCTTCTAC ATGGTAGGAT GAAGAGTGAC GAAAAAGACC AGATCATCCA	10500
GGATTTCAAG GAGAGAAAGA CGGATATTCT GGTTCGACG ACGGTTATTG AGGTTGGGGT	10560
CAACGTTCCC AATGCGACTG TCATGATTAT CATGGATGCC GATCGCTTCG GTCTCAGTCA	10620
ACTTCACCAG CTTAGAGGTC GTGTCGGTCG GGGGGACAAG CAGTCCTAGG CTGTTCTCGT	10680
TGCTAATCCC AAGACGGATT CTGGGAAAGA CCGCATGCGT ATCATGACAG AAACGACCAA	10740
TGGATTGTC CTTCGGGAGG AAGATTGAA AATGCGTGGT TCTGGTGAGA TTTTGGAAAC	10800
CAGACAGTCA GGACTTCCAG AGTTCCAAGT GGCTGATATT ATCGAAGATT TTCCGATTTT	10860
AGAAAGAACGA AGAAAGGTTG CTAGCTACAT TAGTTCTATA GAAGCTTGGC AAGAAGATCC	10920
AGAGTGGCGC ATGATTGCCC TTCATCTGGA AAAGAAAGAA CATCTGGATT AAGCTTTTCTC	10980
TAAGGAAAAC TTATACTCAA TGAAAAATCAA AGAGCAAACT AGGAAGCTAA CCGCAGGTTG	11040
CTCAAAACAC TGTTTTGAGG TTGTGGATGA AACTGACGAA GTCAGCTCAA AACACCGTTT	11100
TGAGGTGGCA GATGAACTG ACGAAGTCAG TAACTATAT ATACGGTAAG GCGACGCTGA	11160
CGTGGTTTGA AGAGATTTTC GAAGAGTATT AAGCTAGTTT TTAGGTTTGG CTCTTATACT	11220
AGAGTCATCA AAAAGAAAG AGGACTCTCA TATGACAGTA ACGATTAAAG TAAATTACCA	11280
AACCACTTTC CAAAAGAGG AAGCAAAAAA CTAGTATAAA CAGAAAGAG AGCGAAATTC	11340
TCTTTTTTCG TTCTTAAAC TACTTTTCAGC CCATCATCCT AAAAGTAAAG AATCTAAATT	11400
CACCTTCTAT TTACCTTTCT TTCTTGCAAT GATTACATAG ATATGCTACA GTTGTGGTAA	11460
CGATTACAAA ATAAAAGGAG CATGCTATGA AAAATCCAGC TTTGCTAGAA GAAATTAAAG	11520
CCTATAGAGG AAGGGATGAG GTTCCGGAAG ACTTTGATGA TTCTGGGAT GGGGAAGTGA	11580

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AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAG AGATTTCCAC ATTCTCAAG	11640
TCAAGTGTCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG	11700
TTCTTCCAAA GAGTGAGGAG AAGGTCCCAT TAATCTTCCA TTTTCATGGT TATATGGGAC	11760
GTGGCTGGGA CTGGGCGGAC ATGCTGGGCT TCACCGTAGC TGGTACGGT GTTGTTPCCA	11820
TGGATGTGGC GGGCCAGTCA GGTACTCAC AAGACGGCTT GCGTCTCTCT TTAGGAAATA	11880
CCGTGAAGGG GCATATTATC CGTGGTGCTG TGGAAAGTCG GCACCACCTC TTTTATAAGG	11940
ATGTTTATCT GGATATTAC CAGTTGGTCG AAATGTTGC TAGTCTGTCT CAGGTGTATG	12000
AGAAGCGTCT TTCTAGCTAT GGTGGCTCAC AAGGAGGGGC TCTAGCTCTA GTTGACAGCAG	12060
CGCTCAATCC TCGAATTCAG AAAACAGTTC CCAATTTATCC CTCTTGTC GACTTCAGAC	12120
GGGTGATTGA GATTGGTAAT ACTAGCGAGG CTTACGACGA ACTTTCCGT TATTTCAAGT	12180
TTACAGACCC CTTCATGAA ACAGAGGAGG AAATCATGCG GACCCTTGCC TATATCGATG	12240
TCAAAAATCT TGCCCATCGT ATCCAAGGTG AGGTTAAGAT GATTACGGGC TTGGACGACG	12300
ATGTTTGCTA TCCCATTACC CAGTTTGCGA TTTATAATCG TCTGACCTGC GATAAAACCT	12360
ATCGCATCAT GCGTGAATAT GCTCAGGAAG CCATGAATCT ATTTGTCAAT GACCAAGTCT	12420
ACAACCTGGCT CTGTGGAGT GAGATTCTTT TTAATATCT AAAATAAGGA GTCGACTCTA	12480
AGCACAAAT CTFAAAAAAT ACAAAACAGC ATAGTATCAG GGGATTAAGA AAACTTTATA	12540
CTATGCGTTT TATCATGGAA ATATAGTAAA ATGAATTAAG AACAGGACAA ATCGATCAGG	12600
ACAGTCAAAAT CGATTCTTAA CAATGTTTTA GAAACAAATG TGTACTATTC TAGTGTCAAT	12660
CTATTATATT TATAGAATTT TTTGTGTCTA GATTGTCAA ATTCGTTAAA ATAATTTTTT	12720
TCAGAAAGCA AAAGCCGATA CCTATCGAGT AGGGTAGTTC TTGCTATCGT CAGGCTTGT	12780
TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAACCACAG TCAGCTTCGC CTTCG	12835

(2) INFORMATION FOR SEQ ID NO: 142:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 5020 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGGATATGA AGACAAAGG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC	60
ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT	120

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ACTTGTATG	GIATGGCTT	GTTAGCTCT	ATCGACTTG	CTAGAAATTT	TGGAGAGGCT	180
GGTCAAAATC	TTGCAAGCTA	CTTGACAGCC	TTGCATCAGA	GCCTGACGGA	TAAACAAAGT	240
GACTTTCGGT	TAATTTTAGG	ATTACTGGCC	TTTGGTTATT	CTTAACACATG	TGTTTCAAGT	300
GACAAGAAAA	GTTGAGAAAA	GACCTATTCC	AACCTTGGGA	TTTTATAGAG	AGAAATTTCTT	360
CAGCAATCTT	CTGAAAGGAT	TTAGTCTAGG	CCTGGCACTT	TTTCTCTGTA	CCTTGTGTAGG	420
TTTAGTGGTC	TTAGGTCAAT	ATCGTTTGGG	ATCCATTCC	TTGAATCCTT	ATTCTCTTGC	480
CTTTGTCTGC	TTTACTATCC	CATTTTGGAT	TTTACAGGGG	ACAGCAGAAG	AAGTGGTGGC	540
CCGTGCTTGG	CTACTTCTCC	AATTGGCCTC	AGAACCCTAT	CTAAACTAG	CTATTCTTAT	600
ATCTAGCCTG	TTCTTTACCC	TGCTTCATAT	GGGCAATCTC	GGTCTCACCC	CTCTATCTCT	660
AGTAAATCTC	TTTTTATTCG	GAGTTGCCAT	GGCTCTTTAC	CTTCTCAAAA	CTGATACAGT	720
TTGGGGTGTT	GCAGGTATTC	ATGGTGCTTG	GAATTTTGCT	CAGGGTAATC	TCTTTGGGAT	780
TTTAGTTAGT	GGTCAACCGT	CAGAACGTCT	CTGATGACCT	TTTTACCACA	AGGCAATCAA	840
GATTGGCTAT	CAGGTGGTTC	TTTTGGCATA	GAAGGTTCCA	TTATGACAG	TCGTGTATTA	900
CTACTCTGTA	TTGTCTATCT	TGCTAATAAA	TTAAAGAAAG	AAATGAAAG	GATGTGACTT	960
CGTCCGCTCC	TTTTCTCGT	GAAATACTA	TAGATGCT	AAATAGGAA	TAGCACATGG	1020
AGAAGGAGTT	CTTATGATCA	ATCACATTAC	AGATAATCAA	TTTAAACTAG	TATCAAAATA	1080
TCAACCATCA	GGAGATCAAC	CCCAAGCTAT	CGAGCAGTGT	GTGGATAACA	TTGAGGGGGG	1140
AGAAAAAGCT	CAGATCTGTA	TGGGGGCGAC	TGGAACAGGG	AAGACCTATA	CTATGAGTCA	1200
GGTCAATTTCT	AAAGTCAATA	AACCAACTCT	GGTTATTGCC	CACAAATAAAA	CTCTGGCTGG	1260
TCAGCTCTAT	GGGAGTTTA	AGGAATTTTT	CCCTGAAAAA	GCAGTTGAGT	ATTTCGTATC	1320
CTACTATGAT	TATTACCAGC	CAGAGGCTTA	TGTCCTTCT	AGCGATACCT	ATATTGAGAA	1380
GGATAGTTCT	GTCAATGACG	AGATTGACAA	GCTTCGCCAC	TCAGCTACCT	CAGCCCTTTT	1440
GGAGCGTAAT	GATGTTATTG	TGTTGGCCTC	AGTCTCTGT	ATCTATGGTT	TGGGTTCCGC	1500
CAAGGAATAC	GCTGATAGTG	TGTTTAGTCT	CCGTCCCTGT	CTAGAGATTT	CTCGTGATAA	1560
ACTCTPGAAT	GACTTGGTGC	ATATTCAAGT	TGAACGTAAT	GATATTGATT	TCCAACGCGG	1620
AAGATTTTGC	GTTCGTGGGG	ATGTGGTAGA	GATTTTCCCA	GCTTCCCGAG	ATGAACATGG	1680
CTTTCGAGTA	GAATTTTTTG	GAGACGAAAT	TGACCTTATT	CGTGAAGTTG	AGGCTCTGAC	1740
AGGTGAGGTG	TTGGGAGAG	TGGATCATTT	AGCGATTTTC	CCAGCGACAC	ACTTTGTGAC	1800
CAATGACGAC	CACATGGAAG	TTGCCATTGC	AAAGATTTCG	GCCGAGTTGG	AAGAACAATT	1860
AGCTGTCTTT	GAAGAAGGAG	GTAACCTGCT	TGAAGCCGAG	CGTTTGAAC	AGCGACAGA	1920

GTATGATATC	GAATGTGTGC	GTGAGATGGG	CTATACCAAT	GGGTTGAAA	ATTATTCCTG	1980
CCACATGGAT	GGACGGAGCG	AAGGAGAGCC	TCCTTATACG	CTTCTCGACT	TCTTCCCAGA	2040
TGATTTCTTG	ATTATGATTG	ACGAGAGTCA	TATGACCATA	GGGCAATCA	AGGOCATGTA	2100
CAATGAGAC	CGTTCGCCTA	AAGAAATGCT	GGTTAATTAT	GGTTTCCGTT	TGCCGTCTGC	2160
TTTGACAAT	CGTCTCTCC	GTCCGGAGGA	GTTTGAGAGT	CACGTTTCATC	AGATTGTTTA	2220
CGTTTCAGCG	ACACCTGGTG	ACTATGAAA	TGAACAGACC	GAGACAGTGA	TTGAGCAAT	2280
CAITTCGTCCA	ACGGGACTCT	TGCATCCAGA	GGTGGAAATC	CGTCCGACTA	TGGGACAGAT	2340
TGATGACCTC	TTGGGTGAAA	TCAATGCCCC	CGTTGMAAAA	AATGAGCGTA	CCTTTATCAC	2400
AACTTTGACC	AAGAAATGCG	CAGAGGATTT	GACCGACTAC	TTCAAGGAAA	TGCGTATCAA	2460
GGTCAAGTAC	ATGCACTCGG	ATATCAAGAC	CTTGGAAACGG	ACGGAGATTA	TCGTGACCT	2520
GCCTTTGGGT	GTCTTTGATG	TCTTTGGTCG	AAATTAACCTG	CTCCGTGAAG	GAATTGACGT	2580
TCTTGAAATG	AGCCTCOTAG	CTATTCTCGA	TGCTGACAAG	GAAGGTTTCC	TTCCCAACGA	2640
ACGTGCACTC	ATCCAGACCA	TTGACGTGTC	TGCACGTAA	AGCGAAAGTC	ATGTTATCAT	2700
GTATGCGGAC	ACGGTTACCC	AGTCTATGCA	ACGTGCTATC	GATGAAACTG	CCCGCCGTG	2760
CAAAATCCAG	ATGGCCTATA	ATGAAGAACA	TGGTATCGTT	CCACAAACCA	TCAAGAAAGA	2820
AATCGTGAC	TTGATTGCTG	TGACCAAGGC	AGTTGCTAAG	GAAGAAGACA	AGGAAGTCGA	2880
TATCAATAGC	CTCAACAAAC	AAGAGCGCAA	AGAACTAGTC	AAAAAGCTTG	AGAAACAAAT	2940
GCAAGAAGCA	GTGAAGTGC	TTGACTTTGA	ACTAGCAGCT	CAGATTCCGTG	ATATGATGCT	3000
GGAAGTCAAG	GCCTTGGAAT	AGGGGAATAG	TATGATTTAT	TTAAGAAAGT	TAAAGAAAGA	3060
AGATTTGATG	TCTTTATGCG	AAATGGCTTA	TTTACAGCTT	AATCCAGTTT	GGAAACAGTA	3120
TGATGCTCCC	TATTATGATG	ATTATCAGTA	TTTTTCAAAT	TTTAAAGAAT	TCGAACATCA	3180
AAATATCAG	TCCATTTTAA	GCAACTCAAA	TGSCCTTGCT	ATTTTGTGTT	ATGATAAACT	3240
AGTTGGGACT	GTTCGCGTTT	ATTGGGTATG	TAAAGAAACA	AGATGGATGG	AATTGGGAAT	3300
TGGTATTTAT	GATAAAAAAT	TCTGGAACAC	TGCTATTGGG	AAAGTTGCTA	TGTTGCAGTG	3360
GATAGATAGG	ACGTTTCAGG	ATTACTTGGA	GTTGGAGCAT	CTGGGTTTGA	CAACTTGGTC	3420
AGGAATATTT	GGTATGATGA	AACTTGCTGA	AAATTAAGA	ATGAAAAAAG	AAGCTCATAT	3480
TCCAAAAGTT	CGTTTATATC	AAGGTAAATA	TTTTGACAGT	ATTAAATATG	GTATTTTGAG	3540
AGAAGACTGG	GAGAAAAATA	ATGACGGTTA	TTATCAAAATC	AATGGAJAAT	CCTGAAGAGA	3600
TAGAAGGTAA	ATCCTTCGTT	CACTGGCAAA	CGTGAGAGGA	CGCTTATGAT	GACCTTTTGC	3660

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CTGCGGAATT TCAGGAGACA ATGACATTAG AAGATGTCG ACTCTTTAGT CAAAAGTATC	3720
CAGAAAAATAC ATTGATTGCG ATGGATGGTG TGAAGATAGT TGGTTTTATA AGTTATGGCA	3780
ACTGTTCGTGA TGAGACTATT CAAGCTGGTG AAAATTATTGC TTTATATGTT TTAAAGACT	3840
ATTATGGAAA AGGAATCGCA CAAAGGTTAG TGAAGCAGC GTTGACTGAT CTTAATCAAT	3900
TTTCTGAAAT TTTCTTATCG GTATTGAAAG ATAACAGCG CGCCATTGCT TTCTATCAAA	3960
AAATGGGTTT TACTTTTGAT GGACAAGAAA AAATACTTGA ACTTGGAAAG CCTATAAAG	4020
AAAAACGGAT GGTATTCTAT TCTAAATAAT TCTCAAAAGT AAAAGCTAAT ATGGTACCAA	4080
GTCTGAAAAA TTAATAAAAT AGAAGCGAG TAAATTTATG TCCCGTTCCC AATTAACAA	4140
TTTAAACAAAT ATCTGTCTGA TTGAAGACCT CGAAACTGAG CGCGTGGTGA TGCAGTATCG	4200
CGCCCTTGAA AACAATCGCT GGTCTGGTGA TGCCTTCCT GGAGTCTATG TAGAAAAATGA	4260
TGAGGCTTTT CGGAGTCTG TCATTCGTGA AATCTACGAA GAAACAGGCT TGACTATCCA	4320
AAATCCTCAA CTTGTCGCA TTAATAATG GCCTACTAGT ACAGTGGGC GCTATATGT	4380
CATTTTGTAT AAGCGACTG AGTTCTCTGG TACCTTCAA TCTTCAGAAG AGGGAGAAGT	4440
TTCTTGGGTG CAAAAAGACC AGATTCCAAA CTTAAATCTG GCCTATGATA TGCTACCATT	4500
GATGGAATG ATGGAAAGCT CCGACAATC AGAGTTTTTC TACCTTCGCC GTACGAAGA	4560
CGATTGGGAA AAGAAAAATCT TCTAGTCTTT TACTAATAAA CCTAGCTGAT CCAAGGCTC	4620
CTCGATATAG TGGAGGTCTT GTTGTGCTC GGCTTCAACT AGGTGATANT GAATACCATC	4680
TGTTAACTCA GAAATTGGCT TAAAGTCAGA ACGTTCAACT TGTCTAGAA AATGTTGCAC	4740
GTGCGGCGCA CAGGTACGTT TTAGTAAGGT TTCAATCTCT CCATAACAG GATGATCAAT	4800
CAAGATATTT TGAACGCGAC CACCATTAAT TACGATAGCA AGTAATTCTC GTCCAATTTT	4860
TTCAACTTCA TGCTTGACCT TAAATAAATT GTGATGATAA GTATTGTCAT TAGCATCTTT	4920
ATAGATATAA CCACGATTG TAGATAGAAT TGGAGATCCA TCAGCTCTTA AATTTGCAAT	4980
ATCTTGAACA ATAACCTGTC GAGTGACATG AAGTGCTCA	5020

(2) INFORMATION FOR SEQ ID NO: 143:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4965 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

AAAAAGTGGC AATCCATTGA TTGGCCACTT CATTTAGAGA ATTATGCTCT CGCCCTTGAA 50

GAAGAAAGTC GTGTAGTACT TGAGTTACTG CTATCGCTAG AACTACTACT TGAAGTGTG	120
GAGCTGGATG GAGTTGGTAG ACTCCCCACA ATACTAGACC AAGCATTTCTG ATAATCCGCA	180
TCACTTCCGC CAATAGCAAA GGGATAACTT GTCGCTGGCG CTCCTGACTT ATTAGCCCAA	240
TAGCTGGTAA CAGTCSAACC TGTGACCTCT ACTTCTTTTC CTTCACAGA AACCTTCTCT	300
GGTTTTTGAC CTGTTGATTT CAAGACTTCC GATTTCACTA CACTAGGATC TAAAGCAAAAG	360
CGCTCGTCC OCCAAATGCT TGGGGAAGCT TGCTGAATCG CATTTACCAG ATGAGCCATG	420
TAAFTAGAGT TATTAGAATA ACCTGCTCTA CGTGACAATG AATGATTATC ATCATGCCCA	480
ATCCAGCCAC CTAGGGTTAA TCTAGGTGTC GAAAGCATGA GCCACATATT TTCGTCTTGG	540
TTGGTTGTAC CAGTCTTCCC AATCCAACTC GCATTAGCCA GAGTAGGATT TAAAGAAGTC	600
AGGTTAGACT TGAAGGTTGT TGTACACGA GAGGATAGAA CTTCTCGTAG CAATCCCTGC	660
ATAATCGTCG CAGTAGCTTT TGAATAGACT TGAACCGGTT TATCTGTATA CTCATACACC	720
ACTCTACCAT CTGCTGCTTC AATCTTGA AATCATGCT TCTGATGATA AACTCCAMTA	780
TTAGCTAAGG TCTGATAGCC ATTGGTATGC TGGGCAACTG TGACTTCAAT ACCACCACC	840
ATPGGCAAGC TCTCAATACC GTACTCAGGA ATCTCGTAAC CCATCTTTTC CATATAACCC	900
TTGACATCAA CACCCTTTTC ACGGAGCATA CGATAGGTCC AGTAAGCAGG GATAATCCAT	960
GAATAGTTCA GAGCTTCTCC CAAGGTGATC ATTCTGTGTC CCTTGCTATT AGCATACATA	1020
ATCGGATTGC CATTAGCAAA GTTTGTGGA TAGTTAGATA GAATCGTTTC ACTTCCCATC	1080
AAGCCCTGCT CAATAGCAAT ACCGTAGGCC AGCAAGGGCT TGGTAGTAGA AGCTGGCGAA	1140
CGTTTGGTAT CAAAGGCATG ATTATTTTGA TTTTCTTGAT AATTACGACC ACCTACAAAG	1200
CCTAGAAATG CACCTGTTTG GTTATCCATC AAGACATTCC CTACTTCTAC ACGACCTGTT	1260
CCATCGTCTA AAGATAGCC ATAAATCAGCA ACCGCACCTT GCATGGCAGA ATGAATTTTC	1320
TGATCTATGG TAGTAGTAAT CTTATAACCA CCAATTTCAA TTTCTTGGC TGCCAAATGT	1380
CGATAAACT TCTGAGTTGC CTCATTTTC AACTCCTTAG CGGAGACATF GTCTCTCTGA	1440
GCTAGATAGT CATACATAGC TTCTTGAGCT TCTGCCAAG TTGTAAGTA TAAATAGTCT	1500
CGTGAAATTC CTGTAAAGGT GCCGATGCT AAAAAGTCCT GTTTAAGGTC ATAAATCTTG	1560
TACTGAGAAAT ACTCGTCTTT GCTTAATGCA CCTGTACGAT ACATACTGTA AAGAACTGCC	1620
TTAGCCCGTC TTAAGCCAAT TTCTAGGTCT TCATCACTCT TCAACTCCCC AGTATTTTCA	1680
TAAGGAGAGT AAGTAATGGG ACTCTGTGGA AGTCTTGCTA AAAATGCTGC TTGAGGAACA	1740
GTCAACTGAC TGGCATCTAC ACCGAAAATT CCTCAGCTG CTTGCCGAGC CCCTGCAATA	1800

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TTCTGTCCCT	TATPATTTTCG	GCCAAAGGGA	GCCACATTGA	GATAGGTCGT TAAATCTCA 1860
TCTTTATTC	TGGCGGCTC	CAAGGCAAGA	GCATCCACAA	TCTCTGCCGC CTTCAGAGCC 1920
AAGGTCCGCG	CATCCCAAC	CACCTGCTGT	TTAATTAGTT	GCTGGGTCAA GGTGAACCC 1980
CCACTAGAGG	AACCCAAACC	TACAAATTTC	CCCAAGGTCT	CACGAATCAC CGCCTTGGGT 2040
ACTACACCC	TATGCTCTTT	AAAGTGTTC	TCTTCTGTGC	CAATGATAGC CTTCCTCAGA 2100
TTTTCGAAA	TTTGCTCAGA	TGAGATAGAA	GTGCGCAACA	AATCACTCTC TATGGAAGCA 2160
ATCACCGTCC	CGTCCGAATA	GCTAATCTCT	GAAATAGAA	AGATGTCTCT GACCTGATTC 2220
ACCAATTCTT	CTGTCTGAGG	CACCCGAACC	TTGTCAATA	AGGCCACTCC GTATCCCAA 2280
GCAATCCAG	CTCCCAACAT	TCTCTCTAGA	AAACCGAGTA	CAAAGAGTAA GTTAAATAAG 2340
GCTTTTATAC	TCAGTAAAT	AGCTGGGAAA	ATGACTGACT	TATCTAAGGT TTTAGATTTT 2400
TTGGTACTTG	AACCTTCTTT	GCCAGGTCTA	GCTGATTTTT	TATTTTTTGG TTTTGTCTGG 2460
AAAAATTC	GCATTTTTCG	TTTAAATTC	TTTAATTGAT	TTTGCAATGA TTTCTCTACT 2520
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GCTAGGCTAT	TGCCCAAGTT	TGTGATACAA	TAGGTAGAAA	CAATAATTTT AAAAAGGAGA 2640
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ATCCAACGTC	TGACAGCCTT	CACCTAGGCC	ACCTTGTGCG	AATCTTGACA AGTCGTGCT 2820
TGCAACTAGC	AGGTCAAAA	CCTTATGCGC	TGCTTGGCGG	TGCTACAGGT CTCATCGGAG 2880
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CTGTCTATGT	CAACAACATC	GACTGGTTTG	GCAGCATCAG	CTTCATTGAC TTCTCCGTG 3060
ATAITGGAAA	ATACTTCACG	GTCAACTACA	TGATGAGTAA	GGAACTCTGT AAAAACCGA 3120
TGGAACAGG	AATTTCTTAC	ACTGAGTTGC	CTTACCAAAT	CATGCAAGG TATGACTTCT 3180
TGCTCTCTAA	CCAAGACCAT	AATGTCACTC	TTCAAAATCG	TGGTCTTGAC CAGTGGGGAA 3240
ATATGACAGC	TGGTACCGAA	TTGCTTCGTC	GTAAGCGGGA	CAAGCATGGT CAGGTATCA 3300
CTGTTCCACT	AATCAAGAT	GCAACTGGTA	AGAAATTTGG	TAAATCAGAA GGAATGCCG 3360
CTGTGCTCAA	TCCCGAAAG	ACTTCTCCAT	ACGAAATGTA	CCAATCTCTG ATGAACGTGA 3420
TGGACGCTGA	CGCTGTTCGC	TTCTTGA AAA	TCTTTACTTT	CTTGCTCACTT GATGAGATTG 3480
AAGATATTCC	TAAACAATTT	GAAGCAGCGC	CACACGAACG	TCTGCTCAA AAAGTCTTGG 3540
CTCGTAGAGT	TGTTACACTT	GTTCAAGGAG	AAGAAGCCTA	CAAAGAAGCA CTTAACATCA 3600

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CTGAGCAACT CTTTGACGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC 3660
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TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG 3780
CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGACTA TGTCTTGAGT GACGCTGATA 3840
AGTTAGAGAA TGAAGTACT GATTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT 3900
ACTAAACTAT TCAACATTTA TCTATAAACA AAGGAGTTAA CCTCGAGAAA GGTAACTCCT 3960
TTTTGTCTGT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC 4020
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CAAGCCAAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG 4140
TTTGCAAGA TGATGATAAC GAATCCAAC CTGGGAAGAA ATCCAACGA TTATCTAACA 4200
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CCTGATCAAA GGGCAAACTT TTGACTAATT CCTCTGTCTC AATCAAGGTG TCTCTGTTG 4440
CCAGAATCAA TTTTTCCTCC TGTGCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC 4500
TCAAGGAGT ATGAATGAG AACATTCCAA TCAATTCAAT TTGATAAGCC AAGAAATAGA 4560
GATTGTAGTG ACTCTTGAT TCTTCAATTA AAGCAATTTG TTCTGAACTG ATATGAATCT 4620
GCTCATCTCG CATCAAGACA TAATTCCCAA TAAGAACTGG TTGGCCATCT ATATGAGATT 4680
TGATCCCTTT GCTTGGGATA TATTGGAGTT TCCCATGCAT TTCTCATGT TCAATTCCCT 4740
CTATCTCAGC TTGCTTGAGC ATGGCATTAG CAATGAGTAG ATAAATGTGT TCCTCAAGAC 4800
AGGCACTGAT TCTGAGAATA TCTTCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA 4860
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GATATTCTC CCTGTTGTGG CCTCTGGCTG TCACTCTGT GCTGG 4965

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(2) INFORMATION FOR SEQ ID NO: 144:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 3232 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:



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CAOGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTGCTT ACTTGCGCCA AAACAAGGAT	60
TCGATAAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATTCGCCA	120
AAC TGCAATA TCGAAGGTCA GAAAGAAATGC CTTTGTATAT AGTGGTAGAT ATTGTCAAC	180
AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT	240
AAAACTCTCT TGGATAATA TCTATTCTTT ATTGCGGTAA TAAGGATTTT TATCATAGAC	300
ATAAAAATTC TGAATTTCC AAACAAAAATA TTTTAAAGT TTTGAAAAAG AGTTAAGATA	360
TTTTTTGTAAT ACACAAAGTA AACGCTTACT TATTAAAGGAG GACATTTTAT GTCATACAAA	420
ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTTGGA GCCAATGGCG	480
CAACAAGTTA TTCTTAAAGC AGCATTTGGC TATATCGCTA GTGGGGCGGG AGATACTTTC	540
ACTTCTTTCC AGTGATTTTA GCGTCAGGTT CTTTTAGTT TTTAAAGATT ATCCGTGAAT	600
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TGAGTAAAJAC TGGAGGATC CCATGCTTAC AGAACATATG GAAGAATAA ATGACCAACA	720
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TGGTAAAGGA AAAGTTGGTT TTGCCACCT TCAAGACCGG GAAGGCCAGA TTCAGATCTA	960
CGTTCGTAA GATGCTGTGC GTGAAGAAA CTACGAAATC TTTAAAAAG CAGACCTTGG	1020
TGACTTCTTT GGTGTCGAAG GTGAAGTGAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA	1080
GGCAACCCAC ATCACACACT TGTCTAAGC TCTTCTCTCT CTCTCTGAGA AATTCCATGG	1140
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CCAAAAAGGA TTCTTTGAAG TGGAAACACC TGTCTCTCAT AATGAAGCCG GTGGTGTGC	1320
TGCCCGTCCA TTTATCACCC ACCACAATGC CCAAAACATT GACATGGTGC TTGATATGCG	1380
GACTGAGCTT CACTTAAAC GCGTTATGCT GGGTGGTATG GAACTGTCT ATGAAATTGG	1440
CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATTAAC CCTGAGTTCA CTTCATCGA	1500
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GATTAACGAA CCNTTTAAGC GTGTTCAATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT	1680
CGATTTCTGG CAAGACATGA CTTTGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT	1740
TCCAGTTGAG AAACATACA CTGAGGTGG TCACATCATC AATGCTTCT TTGAAGAGTT	1800

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TCTTAAGACA TTGTTAGAAA TTGGTTTAAA TTCCCTAAGC AATTTGTGCA TGTTTTATTT 2340
CATTTTACGA TAGTACGCTG AAACCTTTCA AAAAGTACTA GAAATTGACT TGGATTCCCC 2400
AATTGATTTG TTCAGATTCA CTAPAAATAA AAAATTAAAT AGTGGGATAG GAAGTTAGCG 2460
TCAACTAGGA TAGTATCTTG CTTAAACAGT ATATATGGGA TTGATATAAG TCCATAGGTC 2520
CTATTAGAGG ATGTTCTGGT GTCTTATTTCA CTTGTTTTTT ATAGTATTAG TAGATAGAAT 2580
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CGATTTTCTC ATCTGACTG TTTCTTAAAT CATCATTAAC GACGCTTTTC TTCTAGGTGG 2820
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CAATTTCOGAA TAGGCATAGA GACTAGACAA TTTGAGGAGC TGCTTTCGTC CTGTTTCGAAC 2940
ACATTTTCCC ACCACGTGAA GAAAAAGATG GCGGAAGCGT TTGATTTGTA AAGTTTCGAA 3000
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CATACGAACT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTAATCGCCAA AAAATCCCTC 3120
CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACOTCCA CGATAAAGCT GAAACTGGTC 3180
TTGGCTTTGT CCACCTGCTA TATTTGTAAC GAGAGAAAAA ACATCGTAGA AC 3232

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(2) INFORMATION FOR SEQ ID NO: 145:

(1) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 10711 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

CCCGAGAAAA TGATGAAAG TTCAAAACTA TTTGCCCTTG CGGGCGTGAC ATTATGGGG	60
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ACACAATAT TACCAGTAAC GTGGTTGATG GTTGGCTAGA AAATGATCG TACGGGAAT	240
TTCTGCCCTG TATGGCTGAG GATTGGCTCG TATCCAAGGA TGGATTGACT TACACTATA	300
CTATCCGTAA GGATGCAAAA TGGTATACCT CTGAAGGTGA AGAATACGG GCAGTCAAA	360
CTCAAGACTT TGTAAACAGA TTAATAATAT CTGCTGATAA AAAATCAGAT GCTCTTTACC	420
TTGTTCAGAA ATCAATCAAA GGTTGGATG CCTATGTAAA AGGGGAATC AAGATTTCT	480
CACAAGTAGG AATTAAAGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACAG	540
AAAGCTCTG GAATCTTAAG ACAACCATGG GTGTGCTTGC GCCAGTTAAT GAAGAGTTT	600
TGAATCAAA AGGAGATGAT TTTGCCAAG CTACCGATCC AGAGTAGTCT TGTGATPAAG	660
GTCTTATTT GTTGAATCC ATTGTGACCA AATCCTCTGT TGAATTTGG AAAAATCCGA	720
ACTACTGGGA TAAGGACAAT GTGCATGTTG ACAAGTTAA ATTGTCAITC TGGATGCTC	780
AAGATACCAG CAAACTGCA GAAACCTTTA AAGATGGTAG CCTTACGCA GCTGCTCTCT	840
ATCCAACAG TGCAAGTTT GCAGAACTTG AGAAGAGTAT GAAGGACAAT ATTGTCTATA	900
CTCAACAAGA CTCTATTACG TATCTAGTTG GTACAAATAT TGACCGTCAG TCCTATATAAT	960
ACACATCTAA GACCAAGCAG GAACAAAAG CATCGACTAA AAAGGCTCTC TTAACAACAG	1020
ATTTCCGTCA GCTATTGCC TTTGGATTTG ACCGTACAGC CTATGCCCTCT CAGTTGAATG	1080
GACAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTTGTTCAAG	1140
CAGATGTTAA AAACCTTGGC GATATGGTCA AAGAGAAAT GTTCACTTAT GGGGATGAA	1200
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AAGACGAAGT AAACAATATT ACATATTTTG CTGAAAATGC TGCTGGCGAA GACTGGGAT	1500
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ATGACACTAC AGATGTTGCT AAACGCTATG ATAAATACGG TGCAGCCCAA GCTTGTTGA	1740

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TGGTACCATT	TACAAATACCA	TTTGCAATTGT	CAGGAATATA	AGGTACAAGT	GAACCAAGTCT	1850
TGTATAAATA	CTTGGAACTT	CAAGACAAGG	CAGTCACTGT	AGATGAATAC	CAAAAAGCTC	1920
AGGAAAAATG	GATGAAGAA	AAAGAAGAGT	CTAATAAAAA	GGCTCAAGAA	GATCTCGCAA	1980
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AATCCTTTTT	TACATTGTGA	AAGAAAGATT	CTAAAAATGTA	CGGACCCCCA	AAAGTTGGAG	2100
CCTCTTTTGT	TCAGATAGA	AAAAATTTTT	GTTAATTTTA	CTTGTTTCCT	ATTGCTTTCT	2160
CAGCTATTAT	TTGTATATT	AAAAGTATAA	TTATTTTTTA	TTTATCAGAG	TTAAGCAATTG	2220
CACTTTCAGA	GGAAAGAGTA	TTTTTTAAAA	AGAAAAATGTA	AACGTTTGCT	CAAAAATGAA	2280
AGGATTTAGA	AGTTTATGAA	TAAAGGATTA	TTTGAAAAAC	GTGTGAAATA	TAGTATTCGG	2340
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TCTAAGSTCC	TCAAAGCAGT	GATTGACCNA	GCCTTCCCTC	GTGTCAAGGA	ATACAGCTTG	3360
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CGAATCACCC	CTGAAGTCAC	TTATAAGAAA	ATCAATGAGA	CAACAGCAGA	GTACTTGATG	3480

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AAGCTTCGCG ATGATGCTCA CTTAATCAAT GCGGAATGA CAGTACGCTT GCAAGTTGTA	3540
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CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA	3660
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ACGCAATGCA GCGGAGATGA TCATATCGAT GTAACCAATC CAATGAAGGA TTTCGCTAAG	3780
GOTTACATGT ATGGATTGCT TTCTACAGAT AAGCTTGCCT GTGGTGTGTTG GAGTAAGTCT	3840
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ATTATGAACA ATCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG	4140
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CTAGGTGGCT ACAGCATGAA AGACTTTGAA GCGTGGCAGG GAAGAAGTGA CTACAAATGGC	4920
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GTCTTGAAG AACCACCTGA AATCACAGGA CTTCGCTATG TTCCGGGTGG ATCAGGTTCA	6960
AAATGGTAAT TGGAGATGT GAACTTGTGT GTGACAGATG AGTCTGGCAA GGAGCATACC	7020

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TTGTCAAGCT	ATGAAGCAGC	TTTGGTTAAG	GCTCAGAAAT	TAACAGACAA	AGACAATCAA	7260
GAGCAAGTAG	CTAGCGTTCA	GGCAAGCATG	AAATATGCGA	CGGATAACCA	TCTCTTGAGC	7320
GAAAGAATGG	TGGAAATCTT	TGCAGATTAT	CTCAACCAAT	TAAAAGATTG	TGCTACGAAA	7380
CCAGATGCTC	CAACTGTAGA	GAAACCTGAG	TTTAAACTTA	GATCTTTAGC	TTCCGAGCAA	7440
GGTAAGACGC	CAGATTATAA	GCAAGAAATA	GCTAGACCAG	AAACACCTGA	ACAAATCTTG	7500
CCAGCAACAG	GTGAGAGTCA	ATCTGACACA	GCCCTCATCC	TAGCAAGTGT	TAGTCTAGCC	7560
CTATCTGCTC	TCTTTGTAGT	AAAAACGAAG	AAAGACTAGT	ATTTAGTAAA	ACCTCTTAAC	7620
AAATATTACGG	AAGCAGTCTC	TATCTTTTCC	AATGAGGTTT	ATAGTACAGA	AAAAGCCTGA	7680
GAAGATATGCT	TCTCAGGCTT	TTGTAAAGCA	CATAAATACA	ATAGTGCTAT	GACAAAATCA	7740
CCCAGAAAAA	TCTGGGTGAT	AAATGTTATG	GTTGTGCTGG	TTGAGGATTC	TGAATTTTGT	7800
GATCAGGGGT	TGTATTTGAT	TGTTGCCGAT	TATTGTTAGG	ATTGGTAGTC	GTACTATTAT	7860
TTGTGCTTGG	AGTGGTTGAG	CTAGACTGTG	AAAGTTGAAT	ATCTGATGAT	GAGCTTGAAAC	7920
TTTCAGTTGA	TGGGGGTTGT	TGTGGAGCAG	GTGAGTTCCA	CGTAGAACGA	GCACCAATTT	7980
TAAATACGAA	TTCTCCATTT	CTGTAGAGCC	CCCTCGGTAT	ATTCCAATCT	TCTGGATTGC	8040
TTCTTTCAGA	CAGGTAGGTC	ATCATAGAGC	GGTAAACTTT	GGCAGCGACC	GTAAGGCCAT	8100
TGCTTACAAG	TGGTGTGAGA	CGGTAGAAAT	AGCCTGTCCA	TACAGCCATT	GAATATTTAC	8160
CGGTATAGCC	AGCAAAATAGT	TCATCAGGTG	CTACAAATTG	AGAGGTCTTG	ATGTGGTTTT	8220
CAATTTCTCT	GTCTGTATAG	TTAGAGGTTT	CTGTTTTTACC	AGCCTGAGGG	AGCCAAGCAA	8280
GATAGGCATT	TGCTCCAGTT	CCATAAGTCA	AGACTGTTTT	CATCATGTCT	GTACATCATAT	8340
AGGCTGTCTG	TTCTTTCATG	GCAAGAGTTC	CGACATTAGA	GAATCTTTT	TCACTCCCAT	8400
CACTAAAGAC	GACTTTTATG	ATATACATTG	GTTTATAGTA	AGTTCCACCA	TTTGCAAAAG	8460
CAGCGTAAGC	AGCAGCCATC	TTTTCACCTAC	TTGCTCCATA	TTTTTTGTCT	GATTGGTTTG	8520
TGTTACTTGA	AATGGCATTT	GAGTAGTGA	TACTTGGGTA	GTCGATTCTT	AGACCAATTTA	8580
GGAAAGTCTT	GGCGGGTTG	AGTCCGACCT	TGTTTATAGT	TTCCACGGCT	GGGACGTTTC	8640
GGGATTGTTG	CAGGGCGTAT	TGCAAGGTGA	TGTTGCCAAA	GTAGCCCCCTA	TCCCAGTTAT	8700
AAACAGGAGT	ATTTGTCCCA	GGGTAGTTAT	AGGCTCATTC	GTGAACGATA	GTAGCAGTTG	8760
AAATCGTAGAC	ACCGTACTCC	AAGCCAGGAG	CATAGTCTGT	GATCGGTTTC	ATAGTTGATC	8820

CCCAGTCGCG GTTTGPTTCT ACTGCTGGT TAAATCCGAA GAAACATTA CTTGACTGAT	8880
GCGGTGCTCC TAGCTGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA	8940
CTTGCAATTTC ATGCTCTGGA TAGGCAAGT ATTGCTCTGT ATTGTAAATA TCCACAGAT	9000
GTTTTGTAGC TTCTTGGTCT ACATTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT	9060
AGCCTGTTTC TTCTCAACT TGATTGATGA CTTCCTTGAG GTAATTATCC ATGTAAGCG	9120
GGTAATTACT TGCTGATTTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT	9180
TCTCATACTG TTCAGCAGAG ATGTAGCCCT GATTTTTCAT TTCAGATAAG ACCAAGTTTC	9240
GCGGCTCTTG GGCCTCTCTT GGATGTGAAT AGGGTCATA TTGCTTGGT GCCTGAGGCA	9300
TTCCAGCCAG CAAGGCTAAC TGAGGTAAAC TTAATATTAT GAGGTCTTTA CCATAGTAGT	9360
TTTGAGCTGC TGCTGCATT CCATAGTTCC CATTAGACAT GTAGACCTTA TTTATATAGT	9420
AGGTCAAGAT TTCTGCTTG GTTGCTTTT GTCTCAACTG AATCGCTAAC CAAGCTTCCT	9480
GAGCCTTACG AGAAATAGTC TGGTCGGAG TCGAAGTTGA AAAGTAAGTC AACTTAATCA	9540
ACTGTTGGT GAGAGTTGAT CCACTTGGA GGAATTGCT TTCCAAGTTG CGCAAGAAAG	9600
CTCCCAGAT ACGGATGGTA TCAATCCCC TGTGGTCGAA GAAGCGATGG TCTTCGATAG	9660
AAACGATTCG CTTAACCAAA TCTGTGGAA TATCATTAGC TTGGGCATTG ACGCGCGCTT	9720
CAGAACCCAA GTCAGCAATG AGTTGATTTT TATTGTCTGA GATTTACTA GAAGTTGTTG	9780
CAACTAGTTT ACTCTGGAT AGGCTAGGAG CCTGCTAAC GTAGTAGAAA AAAACTCCTC	9840
CGCCTAAGAC AATGGCTGCG ATAACCAAGC TTAAGAAGCT AATGCTCAGA TACTTGATTA	9900
GCGCGAGAT CGTTGGTTTG TTCATCTGT TTTACCACCT AATAAATGTT CTTTGATAAC	9960
ATTGAGATAA GGAATTTGAG GGAAGCACC AGCCTTGATT TCATATCCAT ATTTCGAAT	10020
ATATTCAAGT GGCATTGATT TTTGTCCCTT ATCTTGATGA TAGAAGCGAA TCAANTCGAA	10080
TGCGCGCAAT AAGTAGGTTT CTTGCTGAGA AGAAAGTGA AGAAGGACAA AGCAGATTCC	10140
TTGTTGGGCA AGGACTTGTT CCATATGCTG AATCTGATGT GGATGAAAAT TTTTCATCGG	10200
AATCGACAGT TTTTGTGTTG TTTCTTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC	10260
GCCAGAAATG TCCGTCGTT AAGCTTGTCG AAAATAGGCT TCAACAATCT TGGCACAGCT	10320
TCGTTGTGGA TAGTCCACTT GTACGATTTG AATAGGAGTT GGTTTCTTAT GTATAACAGC	10380
CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA	10440
GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT	10500
TCCACACAAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGTGCCT AATGATGAG	10560



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CTAACTCACA TTAATTGCCT TCGCTCACT GCCCGTTTC CAGTCGGAA ACCTGTCGTG	10620
CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGAGAGGC GGTTCGCTA TTGGCCGCTC	10680
TTCCGCTCC TCGCTCACTG ACTCGCTGCG C	10711

(2) INFORMATION FOR SEQ ID NO: 146:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11887 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

TACATTCAAT CCATCGGCTA CTCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA	60
CGGATACTGT AAGATATTA7 CAATTTTAAT CAATCATCA TTACCGATAA TACTTCTGAT	120
TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAAATGAAGA ATCATTAGAG	180
TCTGGACCTT TTTCTAGTGT CTCACCTTACC TCATATTCTT CACCTTACT AGAATAAACA	240
CTCAAAGCAG ATACTGTGGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA	300
CCCAATTTTT TATAAACAGT TTTCTTCAIT ATTGTATCCT CCTAATGFAA TTATAGCGTA	360
CIATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTTAAATACC	420
CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCAOGCT	480
AGAGGTACTT GCTTGCTTCT TTGATACTAA GTTCAGCCAT TCTTTCCTTG TTTTCTCAA	540
TAAAGCATGT TACCCAAGTG GGATTGCTT TGGAGTAGTC TCGCAGAGTC CAGCCAAATGG	600
CTTTATTGAT AAAAAATTCT GTTTGGTTCA AGTTATGAAG GAGAATCTTT TCCATTAATT	660
GAGTATIGGT CTCTCTTTTT CTTAACAAC TGGTGTCAAT AGCGACAGT CTCAGCCAGA	720
TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAATCA AAGAGCAAAC TAGGAAGCTA	780
GCCGCAGTGG CTCAAAACAC TGTTTTGAGG TTGCAGATAG AGCTGACGCT GTTTGAAGAG	840
ATTTTGAAG AGTATTAGA TTATTCTCTC TAGTTCAGGG TGTTCATACA CCAAACTCCC	900
TACTACTCGA TCTAGGATAT CTACCGTGT CCACAGGAT TTGTGCAGCA CTAATGCTC	960
TAGCTTAGGC AAATCGGTTT CCTTTAGATA AGACTGCATT GCTTTCAAAT AGTTAGCAGC	1020
CACATATGTC TATTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCATAAT CCCAATCGAT	1080
AATCTTIGTT TTTTTCGCTT CTGGAAATA TTTTATAGAG TTTATTCTT TCAGGCACCG	1140
CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTTTAG	1200
AGCTCTTTCG TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCTCTTT	1260

GCCCCACCAA	ATGGTGTGTA	AAGGCATAGA	CAGCCGCTTG	GGTACGATCG	CTGACTTCAA	1320
GTTTGGCAAG	AATATPGGAC	ACGTGGGTCT	TGACCGTCTT	GAGAGAGATA	AAGAGGTTCAT	1380
CTGCGATGCG	CTGATTTTCG	TAGCCCTTGG	CGATGAGTTG	GAGAACATCT	CGCTCACGCG	1440
CAGTCAATTC	TTCAATGAAGT	TCCATATGAT	TGCGGTGGTA	TTCAACCTTC	TTGCTAACCT	1500
CTTGCTCAAT	GGCCAGCTCG	CCAGCAGCTA	CCTTACTGAC	GGCATGAAGC	AATTTCATCTG	1560
CACTAGAAAT	CTTGAGCATA	TAGCCCTTGG	CACCGACATC	TAGCATGGC	ATGATTTTTT	1620
CATTGTCCAA	ATAAGAGGTC	ACAATCAAAA	TCTTGGCTTC	AGGCCATTCT	TTAAGGATTG	1680
CTAAGGTGCG	GTCAATCCCA	TTCACTCTCAG	GCATGACAAT	ATCCAIGACA	ATGACATCTG	1740
GACGCACTTC	CAAGGCCAAG	TCAATCCCTT	GAGACCCGTT	GGACGCCTCA	CCCACAACCT	1800
CTACATCGTC	TTGGAGGTCA	AAGTAGCTTT	TCAAGCCCAA	TGGGACCATT	TCATGGTCAT	1860
CTACTAGTAA	AATTTTCATC	TTTACTCCTT	TATCATTCCT	TATCTAACAG	GGGATACGG	1920
ATATCAACCG	CCAGCCCTTG	CTTGGGAGCT	GTCAAGAGTT	GAACTGTTC	AGCCATATCT	1980
TCAACCCGCT	CCTTGATATT	TGGCAGTCCA	TAACTCAAGT	CGTCTAAGCT	CCCTAACTGG	2040
AAACCAATCC	CATTGTCCAC	CACCTTCAGT	TGCAATTCAA	CATCTGTCTG	ATAGAGGTAG	2100
ACATCTAGGC	AAGATGCCCTG	GGCATGGCGG	AGGGTATTGC	TAATCAACTC	TTGCAGGATA	2160
CGGAAGATAT	GCTCCTCGAT	TTTCTTAGGC	AATTTGGTCA	TATCTGTGTT	GAGACTTAACC	2220
CTAAGATCAC	TCTTGTCTCT	AAGCTCTTTT	AAAAGAATTT	GAATCCCTTC	TATCAAGCTC	2280
TTCTGCTCCA	GTTCAACTGG	TGCAAAATGC	AAGAGCAAAA	CCCGCAAATC	CTTCGGGCT	2340
GTTTCTAAAA	TAGCTGTGAC	ACTCTGCAAC	TGGGTCTGCA	TCTTTTCTCT	ATCCAATTTC	2400
AAAGCCTGCT	GACTGTATCC	CGATAAAATC	ATGTGGCGCG	CAACAACCTC	CTGACTGACT	2460
GTATCTGTGA	AATCCCGAGC	AATTCGCTTC	CGTCTCTTCT	CGATGATTTT	CTCTTCCTGA	2520
GCAAGGCTCT	GATTTTCAGC	TTTTTGAAGA	GCTCTGTGCA	AAAGGTTAAG	TTTACCTGAT	2580
AAGGACTTGA	AATGGGCATC	CAAACTGGA	TCTGCAACCT	GAACCACTTC	TTCGCTGCT	2640
AATAAACGCT	TGAGATTAGC	CTGCATTTTT	CTTAGAGAAA	GCTCTTCGAT	CCCTCGCCAA	2700
AACAGGGCTA	AGAGACAGGT	CATGGACATG	CTGAAACCA	ACAATAAAAA	GACAAATTTT	2760
TCTGTTTTTT	CGACATCTGT	CAAAAAGATA	GACCACTCAA	AATCAAGTAT	TTCAGCAGAG	2820
CTGTGGGAGA	AAAAAAGAC	AAATAGGAAG	GAGGTGAGAG	CAATAATGAC	ATAGGCTTGT	2880
TTTTTTCATCC	TCTAACACCC	TCCACATCAC	CAATCATAGT	GGTCAAGAAA	ATCTTGACAC	2940
TCTGTATAC	CTTGAGATAG	TCTTTTGTTC	CTTGATGATA	GTGTTCATTC	CGAGGGGCTC	3000

980	
GCTTGGGCTG GTTGAAGAAA ATCAAAATCCC CATAGAGACA GTTAAACGCTG AGACTGACTT	3060
CCAATATCTAC AGGTACGATG ATTITGGTCTG TTCTTACCAT CTCTCTGAGG ATAAATGACAT	3120
TGTCTATGATT GGTAAAGATG ACCCTCTCCA GATGAATAGT GTCTTTGCCG ATGAAGCGAA	3180
AGAGATTGAT ATCATTCGAAT TGGCAAGTCT GTTAGCTTGA AAAATGATGA AGATTTCCTAA	3240
ACCAACGATT TTCTCTCTTC TTAACCGTCA CGACCTCTTC AAAAACCAAA TTGGTCTGCT	3300
CTTTTCTCTG GTTCATCATC GGGTAAAGAA GAAAGAGGCT ATAGATAACC GCAACAAAAA	3360
TAGCTAGGAT CACAAAAGGA TTGAGCATAA CGATGAAAAA GAAGAGAATG GTTCCCGCTA	3420
CTAAAAGGAG ATTATTTCCC TCTTTACCAG TGTAGTAGCG AATCAAAAGC AAAAAGAGGA	3480
ATAGTATCAG CAGAAAACGC GAAAAATGCT CTGATACCAT CAAAATCAGA GCTCTGTCTA	3540
GAAGACAGGC TTGATTAAT AAAAAGATT TAAATTTTCT CATAGGTCTA TCTCTCCCT	3600
TCTATTTTAT CACAATTCAA AAAAGTCACC TCAGTCTGAG GATGGAAAAA AGGCGCTGGT	3660
TACGCCCTTT TCATCTGATC CTITGCTTCT TTAAATTTTC CATAAGGAAG ATAGTCTACT	3720
TTTTGTGATG CTGCTATGGT GGCACAGTGA AGGGAACACA TAATCAAGCG TAGATCTGCT	3780
TTCCAGCCTT GGACAAATGC AATCATTCT TCAACTGTGT AGGTTTCAAC CAATTCCAGA	3840
ACGGTTCTG ACATPCCCAAT AGCCTTAGCA CCAAAAACCA AGCACTTAAT CATATCCAGC	3900
GGATTCCGAA CCCCTCCACT AACCAAGAGT TCGACCTTAT CTTCCTCATC TTGGGCAATTG	3960
AGAAAGGCTT GCATGGTAGA CTGACCCCAT TGAATTGAGT AATCAAGCTG GCCACTACGA	4020
CGGTTTTCGA TATAGGCAAA GCTGGTGCCA CCACGACCCG ATAGGTCCAC TGTACGAACA	4080
CCGAATTCAT AGGCTCTTTC GATTGTCTTG GCATCCATTC CAAAGCCAC TTCTTGAGG	4140
ACAATAGGAA CGGGAATTTG CTTGCTATAA TCTGCTAGAT GCGATTGCCA GCTTCTAAAC	4200
TTCTTTCTC CCTCGGCGAT GAGTAAATCC TGCAATGACAT TGACATGCAC TTGCAATAGA	4260
ACAGATTCA TCTCTCTAC AGTCTGAAGT CCTAACTCGA CAGGCTTGT CAAATCCAATA	4320
TTGGTTCCAA GGAGGAGATT GGGATGACTA GACTTGACAG AAAAAGAATC ATCCGTTGGA	4380
TTTTTGAGGG CTGCGCTATA AGAACCCTT ACAATAAAA TACCACAGGA TTCCGCCACC	4440
TGAGCCAGCT TTGATTTGAT TTCTCTTCCC TTAATTTACT CACCAGTCAT GGCATTGATA	4500
TAAAAAGGAA AGTCCCACTT TCGACCAACA AACTCTGTG AAAAGATCGAT TTCAATCCAGA	4560
TTGTAAAGAG GCAAGGAAGA ATGATCAGC TCCACTCAT CAAAGCTATT ATAGGAACCT	4620
TTCTGTCAA GGGCATAGAG GATATGCTCG TCTTTACGAT TTGTCTCAT GTCTATCTCT	4680
TTCTTGATAT AAGAGCTCAA TCCCCAGATC GKKCCACGA TTTTTTAGG TTTTGGTTGA	4740
TTGCGCATCA AAATCTAGGG CGATGCCACA GTACACCA CAAGCACCA TACTCTTGGC	4800

AACGGTCTGC	AAATCTTGAC	TGGCTTCTTT	CAACTGTCTA	AGCAAAGCGG	TGTAAATATC	4860
TGTACTCAAG	CCTTCTAAAA	GCTTGTGGC	TACTTCTACT	TGATCGATAA	TCTTTTCTGA	4920
TTTCCCCTGT	TCCAAGGCTT	CTACCAGAGA	AGTCACCGTT	TCTTTTGAGG	AAAGTTAAAAA	4980
ATTTTTGATTG	ATATTTTGCT	TGATTTTGCTG	GACCATGTGA	CTCGATACAG	CCACTTCCCTT	5040
GGTCCATCCC	ACTAAGAAAT	CACATTCTAA	AGTTGGTTTC	ACTTGTGAAA	TGAAAAGGCC	5100
CCAATCAGCG	TCCAGAACTG	TGCGCAAGTT	TTCTTCTTCT	AACCAAGCAG	CCACCTTCTG	5160
GGCATCAAT	GACTGGTAGA	GAACCAAAAT	CTCTGCCACA	ATACAGGCAA	GGTCGCCCAT	5220
GGAACCATTTG	TCTCCTGGCT	TAGCAAGAC	AGCGCTAGTC	AGCTTGAACA	AGAGCTCCTG	5280
ATCAACAGAA	ACATCATACA	GAGCCAGTAA	AGCCTTGACA	ACCAAGACAA	CGACGCTGCC	5340
ACTAGAACCT	AGACCAAACT	TTTTCCCTTC	TGTTTCCATT	TTGCCACAGA	TTTCTAGAGA	5400
AAAAGGCTCTT	AAATTCTGAC	CACGAACAGC	GAGGAAGTCT	CCCATCAAAG	CAATCGTTTC	5460
TGGAATCAAG	CTATAGTCAG	GATTAGGCCT	TAAATGCCACT	GGAAATCAA	ACATATCTGA	5520
ATAGATACGG	TAGCTGTGAC	AAAAGCAAT	CTCAGCCCTC	ATATAGATGG	GAATATCCCT	5580
TATCAAAAGCT	AACCTGCCCTG	GCTCTAAAAAT	AGCATATTACA	CCTGCCCAAT	AGAGTTTTCC	5640
GCAGTTTGA	ACAGCAATCA	TCTTGACTCA	AATCCTTTGT	TTTTGACACA	ATCAAGCGAT	5700
AACGATGACC	GAATAATTCT	GATAAATGCT	CCAAGTCTTT	CTCCTGACAG	AAGACCTTAA	5760
CATTGGGACC	AGCATCCATG	GTAAGTAGC	AGGCTCTCC	TTTCTCAAGA	AGCTGGCGAA	5820
CAAAGGCCAT	AGCCTCATAA	GAGGCATCCG	TCAGATAAGA	AAAGGCTGGA	CTAGACGTCT	5880
TTGTCGTAGC	ATGCATAGCC	AGGGCATTTT	TCTCCGTTAA	TTCTCCAATC	TTGGCAAAAAT	5940
CATTTTCCTT	GAGATAAATC	AGCATATCTC	GATAGTCCTT	CTCAGACTGA	CGAACCCAGT	6000
CGTCGAAAGT	CGTCGAGGTT	TCCACACAAA	GTTTTCATCCC	GTACCGGCTA	GAGATTGGTTT	6060
TTTCTCTGTG	CTCTAGCACC	AACATAATCA	TAGCTAGTTT	CAAGTCTCTC	TCTACAGGCT	6120
AAATTCTCC	ACTATCCTTA	TCCCAGGCTC	CTAGTGGTCC	ATAAAAACTC	CGAGAAGAAG	6180
AACCTGAGGC	AAATTGGCTT	TCCCTGTGCCA	ACTGACCTCT	ATCCAATCCA	AGCTTGAAAT	6240
AAGCATTACA	AGCCTTGACC	AGGGCGGACA	AACCACTAGA	ACTTGAGGAC	AGACCCGCTG	6300
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GGTCAATAAT	CTTACTCATC	TTGGCATGCT	CGACCTCAT	TTGTAGCTGA	CCATTGATGT	6420
AAAATTCTGC	AGCTGTTACA	TTGGCTGGTA	AAGGCGACAA	GGTCGTCTCT	GTATACATAT	6480
TTTCCAAGT	TAGAGAAATA	CTGCTAGTAG	CAGGCACCAT	CTCTTTTCTT	TTTTCTTTTC	6540

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CCCAATATTT	GATTAATAGCA	ATATTTGGGT	AGGAACGTAC	TGTTACAGGC	TCCTATFCCA	6600
TGCTGAACA	GCTCCTTCT	CCTCTAATCT	TCTGTCTAGT	TCTTGTGCGT	GTGTCAAAT	6660
GGTTACCAAG	CCTATGATAC	AACCTCTAG	CCCACCACCG	CTCATCTTGG	CACCCAGAGC	6720
ACCAATGGCTA	AGAGTCGTTT	CAACCAAAAA	GTCTGCCTCA	GGGCTACTGA	CTCCAATTTT	6780
TTTAAATGT	AAATGCGGTT	GACTGAGGAT	TGTGCCAGT	CCTTCAGCAT	CTTTTGTGA	6840
AATCGCACT	TCTGCTTGCT	GGTTAATTC	TCCCAAGGCA	TGCAAAAAAG	GTAGGGCATC	6900
CTTGCCCTTA	TTTTGAACCA	CTTGGATGGC	TTACAGAGTA	TGACCATAAA	CACCCGTATC	6960
GGCAATCACC	AAATAGGCGG	ATAAATCCAT	CTCAAGTTCT	GTAAATCCTA	CGTCTTGAT	7020
AAAGCGAATA	GGTTGGTCAC	TAAGACAGGT	CTTAGCATCC	AAACCACTAG	GATTCATATG	7080
GGCAATCAT	TCAGCTCGAT	TGACCAAGAT	TTCTAGTACA	TCATGAGCCA	GATCAGCCTG	7140
ATAGTAGTACA	AATACTGCAC	GAATGGCCGC	TATGCTGATA	GGCGCTGAGC	AACCATCCCC	7200
CCCTTTCTCA	GGGATAGCCG	AGTCAATCTC	ACAACGAATG	CAGGCTTCTG	TGATATTCAA	7260
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AGGATAACCG	TAAACGACCG	CATGTTCCCC	TATTAAATTT	ATCTTACTAT	GTGCCTGACC	7440
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CCATTACCAA	TCGCTTCTTT	CATTAATGAA	CCCATTCGCC	ATTATAGTTG	ACGAAATAGC	7620
CATCTACGGT	CGTATTCACT	GCCAAAGCAC	CTGAGCGCTA	TAAGCGTAGT	ACCATCTGCC	7680
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CTCATTAACA	AGTACTCGTT	TCGGCCATTT	ATAGGTGCGG	TGTTTGGAGA	AATAGGTTTC	7860
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GGAAACGCC	TTATGAAGTA	TGCTACGGGA	AACTTATGCA	CTTAATTTGA	CAATTCAGAA	8040
TGTAAAAATA	TATACTATAG	TAGATTGAAG	CTAGAATAGT	ACACCTCTAC	TTCTAAATA	8100
TGTTTAGAAA	TCGATTGAC	TGTCCTGATC	GATTTATCTT	GTTATATCT	CAATTTACTA	8160
TAAATATTGA	TAAATATCT	TAAAGTATT	ATTATGTTGT	TGTGTTATAG	ATTGATTGAA	8220
TCTTAATCAA	GGATCTTATT	CAATTAATAG	AACTATCACA	TACTCAAGGT	CAGCTCACAG	8280
ATGAGCAACT	ATTTTGGTTA	CAATGTCTAC	TAAATTTAAG	TCAAAACAAAT	AATTTAGTCA	8340

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GAAATTTGCT AAGTAATTTA TCATTCCAAC ACGGAATAGC TGGACTACTG TTTCCTCTAA	8520
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CATATGCTTT ATTTCCTAT TCTAAAGTCT TAGAACCTTC TATGTTTTAT AATGATCTCC	9000
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TGTACGATTG TGACGGAAAC AAAGATATTA TTAGTAAATA TCAAGAAATT GTTTTTAAC	9180
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ACTTCGGAAT AGGAAGCATG GGGTATATTG GTGCTATTA AATAATAAAT TCCCATTCGA	9420
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TGCTGCTAAA CAGCTGTTTT TCA7CATTCG GCGACAGTAT TTTCTACCTC GCCATTATCA	9540
ATTATGTGGC TCAGTACAAT TTCGCTCCGC TAGCGATTTT ACTGATTTCC ATTTCAGAGA	9600
TGCTTTCCCT ACTATCGCAA CTC7TCTCG GGA7TCTAGG AGATTTTCAA GAAAA7AGAG	9660
TCAAACAGC ACTCTGGATT GCCAAA7CA AAATCTGCT CTACGCTATT TTGACAGTAT	9720
TTCTCGTCTT GTGCGCCCTT TCA7TAGTTT CAGTCATTAT GATTGTATC ATCAACCTCA	9780
TC7CTGACAC CTTGAGCTAC CTGCTGCCT ACATGATGAA CGCCCTCTAC ATCAGTGTA	9840
TTAAGGACGA C7TGATGAT GCCATGGGT TCAGGCA7C TCTGATGAGG GTTGTCGCTA	9900
TTGTGCCAA TCTGGCTGCG GCATTCCTTA TCAATGT7AT AAGTATTCAA ACTATT7CCC	9960
TTATCAACAC TCTGACTTTT GTCATTGCCT TTTTGCCCT GTATGTTATT CGACATACCT	10020
TGTATGAGGT TGA7AAAAA ATTGAAATGT CACATACAGC ACTGAGTTTT AAGAAAT7AT	10080

984			
TTCAACATCT	TAACAGTCG	CTGGCTGTGC	TCTCGAGGTT
10140	AAAGATACC	GTCTACTAC	
TGTTTTCTGAC	GACCACTATG	ATTGCCATCT	TGGATGTGTC
10200	CCTCGCGTG	ATTCGCCCTC	
GCTTCATCCA	ACAGACACTA	GCACAACTGA	GCATTGGCCA
10260	ACTCCTGCCC	CTGCTCTCCA	
TCATCATGTC	TTGTGGAGCT	ATCCTTGGCA	ATATGACCA
10320	CAGTAATCTA	TTTAAAAATA	
TCCGTTTCAC	GCACCTCTTG	GTTTTCTGTG	AGATTTCCTT
10380	ATTGACTCTA	ATAACTTAGTA	
TCTTTTGCA	AGCCTATATC	GTAATTTTCA	TGACCAGTTT
10440	CATCAGTTCT	ACGATTATCG	
GCATTCTCAG	CCCTGCGCTA	CAAGCAGCTG	TCTTTGCCCA
10500	TATCCCCAGT	GACAAGATGG	
GGACGGTGGG	CTCTGCTCTG	AGCACAGTGG	ACATTCCTGC
10560	CCCGTCCCTG	CTCTCCCTAT	
TAGCCCTATC	CATAGCATCG	GGCGTTTCGG	TGCAGTTAGC
10620	ATTGATATTT	TTGTATCTTA	
TTTTAATTGC	TCTTATCTTT	TGTCAATGGT	TAGTCAAGTT
10680	CAACACTCAT	AACTAACGAA	
AAAGCATGTG	TAGATTTCAC	ATGCTTTTAA	TCTCCCAAT
10740	CGTCAGGTCA	AGTACAACAA	
AGTCACCTCT	TTGATTAAAG	GAGTGTCTTA	ATATAATTAT
10800	AAGCGCCCTG	TCATTACCGA	
ACCCATTTCG	CATTATAGTT	GACAGAATAG	CCATCTACGG
10860	TCTGATTTCAC	TGCCAAAGCA	
CCTGAGCTAT	AAGCATAGTA	CCAGTTGCCA	TTGACCTGGA
10920	ACCAACCTGT	CTTCATGTCT	
CCATTACCTG	CATTTAGGTA	GTACCAAGTT	GAACCATCTT
10980	GATACCAACC	AGTTGCCATA	
GCTCCTGATG	AACGGAGATA	GTACCAATTG	TTCCCAAGGT
11040	TTTGCCAACC	TGTTTTTATA	
TGCGCATTTG	GGTGGTCTAA	ATAATACCAA	GTGGTACCTT
11100	CCTGATACCA	GCCAGTGGCC	
ATTGCTCCTG	AGGAACGGAG	GTAGTACCAC	TTATTACCTA
11160	GATATTGCCA	ACCTGTTTGC	
ATAATACCAG	TTGTTGGATC	TAGGTAGTAC	CAAGTCGAAT
11220	CATCGTTTAT	CCACCCCGCA	
CGTCTTTTAC	CACCAAGGTA	GTTTTCTCCA	TTAATTTCGG
11280	TCTTAGCTAG	ATAATACCGA	
TTAGACTGAT	CATAAAGCCA	ACCTGTCTCT	AAAGAATGAT
11340	TTTGATTAAA	GTAATAGTTC	
GTATAATAAC	GCTTCTCTTC	TTTATCTTCT	GAATCTTCAC
11400	GTTTTTCCCC	GTACTTTCTT	
CAACACTGT	CTTTAGTTTT	AATCTCTAAT	GTTTTCCAA
11460	CAACAACTC	TTGTAGCACT	
CCATTTTTAT	CGAAGTAGTA	CAACTCTGAC	TTTGGAAAA
11520	CTTCTAATCT	GATACCAATT	
GGGAAGGAC	CAATGTACT	ACCTTTAGAT	GGAAACGGGA
11580	TATATTGCCA	GCCGACAACT	
ATCTCTCCAG	ATAGAGAATC	AAAATAATAG	TACTTACCAT
11640	CAATCACTCG	CCAGTAGGTT	
TCTTTGAGGT	CCCCCTTTTT	TGATAGGTT	CTTCGGTTTT
11700	CTTGGACAAA	CTGCCATCCT	
TCAGAAATCAT	CTGCAAAATC	TGTACTGGTC	CCTAGCAAA
11760	CAAAGAAAAA	TACTGTCACT	
CCAACCTGCA	TAGTTTTTTT	CAAAATTTTC	ATCTATATAC
11820	CCTCCAAATAT	TAAATCCACT	
CACCAGATGA	GGCGAAATTA	TAAACTTTAC	CATCGATAGT
11880	TTGGCTACCT	GTAACCATGT	

995

CTCCAGG

11887

(2) INFORMATION FOR SEQ ID NO: 147:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 11340 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

CCGGTATGTT CTGGAATACT ACCAATCTAA GCTGGCTGTG CCTACAGTT TTACAACCCCT	60
GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTGGAGT CTGGTATTTTC	120
AAACGCTGAT AAAATATCCG ATATTCCCTTT ATCAGTTTTG GAAAAATATGT CTAAGRAAGA	180
CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA	240
ACAAGGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACCTTCTA GTCTTTACAA	300
GTATCTAACC GAGGAGGTTG AAAACGATCA GGGGGAACCT TATTCTCTATC GTAATGTAAT	360
GA AAAAAGTT TCCACCAAGA AAAAGAAAGA AACCCCTTGCT GCCAGAGCTG AAAATATCAA	420
GCAAAAACTC TTCTAGGTG ATGAAACAGA AGGTTTCTTA ACTTATATCG ATCAAGAGCA	480
CCCACAACAG CTTTCAATC GAGCTCTCTC ATCATTCAAC AAAAAAAG AACGAGATTT	540
AGCCATTATT GCCCTTCTCT TGGCATCTGG TGTTGCTTA TCTGAAGCTG TTAATCTAGA	600
TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAACG	660
TGACTCAGTC AATGTCGCTG CTTTTGCTAA ACCTTATTTA GAGAATTATC TGGCCATTCG	720
GAATCAACGC TATAAAACGG AAAAAACAGA TACAGCCCTT TTTTAACTC TCTACAGAGG	780
TGTTCTTAAT CGTATCGATG CTCTAGCGT TGAGAAAAAT GTTGCTAAAT ACTCAGAGGA	840
TTTTAAAGTG CGTGTAACAC CCCATAAACT GCGCCATACA CTAGCAACTA GGCTCTATGA	900
TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC	960
TGACCTCTAT ACCCATATTG TTAGTGATGA ACAAAGAAT GCTCTGGATA GTTTATGATT	1020
TTACGTATTT TAAATATGT AAATAAATAT CAAAAAAGA AGTTGGCCAA CTCTTTTTTG	1080
ATTTATCCAA CTACCGCTTC AGCGATTCTT TCACGGCTAA TACCAGCGAA GTAGCGTGTG	1140
ATATCAATGG TTTTTCGCGC CTTAAGAACA TCTTCGCGTT CGTATTTTAC CCCACGAAGG	1200
ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAGAAGT CACCATAAAT CTTGATGTCT	1260
TGATTTTTTG ATTCAAGTAC GTTAGCAAG ACTTCAACCT TACCACATAGT GAATTCGATT	1320



CCACGACGGA CGTTAAATTC AGGTGATTTA CCATAGTTC AGTCCCAAGT TCCAACTTA	1380
GATTCCTTGA TCGATTGAT TTCGGCCAAT TCCTCTCTTG AAAAGACGTA TTCAGTCATC	1440
TCTGGGTACT CTCTTTTCAT GTATTCCAAG AGTAAATCAC GGAATTTTTC GACTGTGATT	1500
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GATTCAAATTT TATCTTTTGA AACCTTAAG GCAATTTGGA GCACTGACAA ATCAACGTCA	1620
AAGAGCAAGC AACCGTGGTG CATGATACGG CCGTGTATAT AGGCTTGGC ATTGCCACAG	1680
AACCTCTTAC CATCAATCTC AAGGTCACTA CGACTCTGTA ACTCAGCTTT AACCCCAAGT	1740
TGAGCCAGGG TATTGATAAC CGGAGTTGAG AAGCTCTTGA AGTCAATGC CTTATTTTCA	1800
TCTTCTTTGG AGATGATCGT GTAGTTGAGG TTATTTAAAT CGTGGTAAAC AGCTCCACCA	1860
CCACTAATAC GCGCAACTAC CTCGAATACCA TTTTCGCGAA CATAATCACG GTTGATTCT	1920
TGATAGTGT TCTGGTCAGC ACCAACCAATG ATAGATGGCT TGTAAATCCA AAGTAGGAAG	1980
ATTGTACTCT CATCCAAAGG GTGTTTAAAG GCGTATCTTT CCAAGGCAAT ATTAAGAACG	2040
GTGTCATTG AATGATTGAT AATGTATTTC ATGATATCCC TTACTTTTAT ATGATAGAAA	2100
CTGGAATAA CCTTCCAGTC TAATCTATCT TCGTTTTAT TTTTCTTAGG TGAATGGATG	2160
GCCATTCTTA GAACATCTGC AAACGCTTCG TACATCACT CAGAGTAAGT TGGTGCCCG	2220
TGGATGGTCT TCAGCATTTT CTCGAACAGT ATTTCCATTT CGATGATGCT TGATGCTTCG	2280
TTTATTAAT TCGCGCTGC AGGACCAATA ATGTCTACAC CAAGGATTTC TCGTATTTC	2340
TTATCAGCGA TAACTTTTAC GAAACCTTGA GCTCGCTCAG ATGCAATAGC ACGACCGTTA	2400
GCAGCAAAGT TAAACTTACC GATGGCAACA TCGTATTCTT CACGGGCTTG TTCTTCTGTC	2460
AAACCTACTG CTGCTACTTC AGGGAGAGTG TAGATGGCTG CAGGAGTCAA ATTCAATTG	2520
GCACTGCGAT GATTTCTCTT AAGGGCATTT TCAGCGGAAA CTTACCCCAT GCGGAAAGCT	2580
GCGTGAGCCA ACATCTTAGT ACCGTTGATG TCACCTGGTG CATAAATGCC TGGAACTGAA	2640
GTTTCATGAT ATTGTTGAC CTTGATACAA CCACGATCCA ATTCAAACTC AACCTCTCA	2700
ATACCTTCAA GGTCTGGCAT ACGACCAATT GAAAGAGAG CTTTGCTTGC GATGATATCG	2760
TCCTTTCTCT CAACCTTGAT ACGAAGTTGA CCATTTTCTT CAATGATTTT TTGCACTTTA	2820
GTACAGTCA AGATGGTCAT TCCTTTACGC TCAAGAATCA AGCGAAGGTT CTAGAAACT	2880
TCCACATCCA TAGCTGGAAC TATACGCTCC ATCATTTTGA TAACAGTCAC TTTTGAACCA	2940
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CTTTCTGCCA CTCTGTTTAT TTCAAGAATG TCATCACTAG TCATGACAAG TGGAGATTTCC	3060
ATACCAGGGA CGTTGATCTT GTTGACTTTT GAACCAACG CAAGAATGAT TTCTTGGTT	3120

TCAGCAATT CAGAACCAT TACCAAGACG TTCTTGCTT TAGTGATTGT ACCAATTCCT	3180
TTATGAACAG TAACCTCGTA GCTACGAAGA AGTCCTGCCA CACCACCAAC AAGAGTATTTA	3240
ACAACCTTAG ATTTAGTTTC TAAAGTTTTT TCCATATCAA CAGTGAAGTT AGGATTTTCA	3300
ATCAGGATAC CACGATTTGC AGCATGACCG ATATTTTCAA TAATTTACGC GTTATGAAGG	3360
TAGGTCTTGG TTGGAATACA TCCACGGTTT AAGCAGGTTT CACCAAGTTC AGATTTCTCA	3420
ACAAGGGCAA CCTTACCGCC GAATTGGGCA GCTTTAATGG CTGCAACATA ACCAGCAGGA	3480
CCTCCACCAA TCACAAGCAT ATCAAAAGCA TCATCGCTCT TACCATCATC GTTTGAGGTA	3540
CTTGCTACAG GTACAGGGCT AGCTTCTGGC GATGCTGCTC CAGCTGTTGG GATGTTTCC	3600
CTTCTTTCAC CAAGGTAACC GATAACTTCC GTTACAGGGA CAGTTTCACC ATCTCCTTTC	3660
AGAATGGCAA TCAAGTACCC ATCTTCTTCG GCTTCCAAAT CCATGCTGAC TTTATCAGTC	3720
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ACGATTTGTC CTTCGTGTCAT ATCCACGGCG GCTTTTGGCA TAATTACTTC TAAAGCCATG	3840
TCTTCCTTCC TTTATCTATA TCTTAAAAAT GAATACCTCT GCTCTTAAAT TAACATTGAG	3900
ATTGGCGTTT CAATCAACTC TTTCAAGTCC TTCTAFAAAT TAGCACCAAC CATACCATCT	3960
ACGACCGGT GGTCAATGGT TAATCCTAAA CTCATGATTG GGCGAATCAC AATTTCACCA	4020
TTGACGACAA CTGGCTCTTC GATTGTGGA CTGACACCAA GGATAGCTGA GTTGGGTTGG	4080
TTAATAATCG GACCAAAGGA CTGAACACCA AACATTTCCA AATTACTGAT TGTGAATGTT	4140
GAATTTTGTA ACTCACTTGG AGCCAAATTA CCATCCAAGG TACGGCCAAT AACATCCTTA	4200
AAGGCTACAA CCAGTCTGTA AAGACTCATC TTCTCAGCAT TGTAAACAAC AGGTGTCATC	4260
AATCCATTAT CCATCCCAAC TGCCATGGCA AGATTGACAT AGTTGTGAGT GATAATAGTC	4320
TTGCCATCTT CTGTCAATGA AGCGTTGATG TATGGGTGTT TCATAAGAGT CTTAACAAC	4380
GCAAGCGAAA GAAGGTCTGT TACAGTAGTC TTCTTCCGAG TTGCTTCCAT GATTGGCTCA	4440
AGAACCTTCT TACGAAGAGC CAACATTTCA GTCATATCAA CTTCATAGTT GAGGGTGAAG	4500
GTGGGCGCAG TCAAGTAAGA TTCAACCATG CGTTGGGCAA TAACCTTACG CATTTGGTGC	4560
ATTGGAATAC GCTCGATTTT ACCATATGGT GTTACGTTAT CAGGGACTTC TTCCACTTTT	4620
TCAATCTGAG CAGGAGATTT GATGCTATCG TTTCGATAT TTTCAGGAAG CAGGGCCAAA	4680
ACATCTCTCT TCAATGATTT ACCACGATGA CGGTTTCTCT GGATTTCTCG CCAAGCAATG	4740
TTATGTTTGA GGGCAATTCG TTTTGAAGT GGGGAAATGC GAACCAAGTT TGTGTCCTTA	4800
TAAGTTTCCA CGTCTTCTTT GTGACACGA CGGTTTGCAC CTGAGCCAGA AACGTGCTAG	4860

988

AGGTTTATCC CTAATCATC CGTAACTTT CTAGCTGCAG GAGTCGCTCT TAGCTTGTCG 4920  
 TCAGGCATGA CCTCTCCAAT TCTATTATG ATACAAAGGG CGTCAAAAGC GACTGAAAA 4980  
 TAGGAATGCG ACGATGCGTT CGATGAAGCC AAGGAGATTT ATCTTTTTC CGATCTTTTA 5040  
 GCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT 5100  
 TTCTCGTCAG CTATTATTTA TTTACATAAC TTATCTTATG TAACCTTATP CTTTGTATA 5160  
 AGTTTTGCG ATTGCATCTT TGATACCTTC AACTGTTGGA ATCATGCTAT TTTCTAGGTT 5220  
 TTGTGCATAA GGCATCGGCA CATCTTCTCC TGCACACGG CGAATTGGTG CATCTAGATA 5280  
 GTCAAATGCT TCTGATCTG AAATAATAGC TGAAATTTCA CCGATATAGC CACTTGTATT 5340  
 GTGGGCATCG TTGACAGAA CAACCTTACU AGTCTCTTC ACTGAGTTTA TGATGATATC 5400  
 CTTATCAAGC GGAACAAGGG TACGTGGGTC AACAAATTTCA ACTGAAATTC CTTCTCTGC 5460  
 TAATCTCTCA GCAGCTTGAA CCACACGGCG AAGCATTTTT CCATAAGTAA CAACCTGTTAC 5520  
 ATCCCTTCTC TGGCGTTTGA TTTCAACAC CCACAGTGGA ATTGTGTAGT CTGGATCAAC 5580  
 TGGCACTCC CTTTTTGGT TAAATCTGA CTTGTACTCA AGTATAATAA CTGGGTGTGT 5640  
 ATCACGATA GAAGACTTAA GCAGGCCCTT CATGTCCGA GGTGTCCAG GTGCCACAAC 5700  
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 GCCAATCCG TTACCAGCTG CACAACGAAC AGTCATTGGA ACTGACCTT TACCACAAA 5820  
 CATGTAACGT GTTTAGCAG CTGGGTTGAC GATATTGTCC ATGGCAATAA CAGAGAAATC 5880  
 CATGAAGGTC ATATCGACGA TTGGACGAAG TCCTGTCTAG CTGCTGCTCG CTGCTGTCTC 5940  
 AGAGATGGCA GCTTCAGAAA TCGACAGTC ACGGACAGT TCTGACCAA ATTCTCAAG 6000  
 CATTCACAA GAAGTACCGA AGTCTCTCC GAAGACACG ACGTCTTCTC CCATCAAGAA 6060  
 CACATTTTCA TCGCAGCGCA TTTCTCAGA CATAGCAAGG ATAATGGTGT CACGGAAGGA 6120  
 CATGTGTTTT GTTTCATTT TATCTCTTC TCCTTAGTCT CGCTAAATAT CTTCAAAGGC 6180  
 TGATTCAAGC GTTGGGAATG GCTTTTCTC TGCAAAATTA ACAGAAAGCT CTACTGCTTC 6240  
 CTTTACTTGC GCTTGGATT CTTCCAATTC TTGCGCACTT GCAATGTTAT TTTCAATAAG 6300  
 GFAATTGCGG AGCTTTTCA TTGGATCTTT TTGTTTCCAC AATTCACCTT CTTCAAGCGT 6360  
 ACGATATTTA CCAGGGTCAG ATGATGAGTG ACCGAGCCAG CGATAAGTTA CACTTTCAAT 6420  
 CAAGACTGCA CCATTGCCAC TCGAACATG GTCCACAGCT TTCTGAATAC CTTCAATAGAC 6480  
 ATCGATGACA TTGTTACGCT CTTGATGAA CATTCAGGA ATTCCATAAG CGGCGCTACG 6540  
 TTGATGATA TGTCTATAT TGGTCATTT CTTGATATCC GCAGAGATAC CGTAACGCTT 6600  
 GTTAATGCAA TAGAAAATCA CTGGCAAGTT CCAGATAGAA GCCATGTTCA CTGCTTGGG 6660

GAAACACCT TCATTGGTCG CACCATCTCC AAGAAGCAG ACAACGATTT TACCGTATT	6720
TTGCATTTCG TGACTAGGG CTGCACCGAC AGCGATCCCC ATACACACAC CTACGATACC	6780
ATTGGCACCA AGGTTCCGAC CATCAAGGTC AGCGATATGC ATAGATCCAC CTTCCTCTTT	6840
ACAGGTTCOA GTGTATTTC CAAGGATTC AGCCATCATT CCGTTGAGGT CAATCCCTTT	6900
AGCAATAGCT TGCCCGTGT CACGGTGGTT TGAGGTATTC AGATCATCTG GATTGAGAGC	6960
TAACATAGCC CCCACGTTAG CTGCTCTCTC ACCAACAGAA AAGTGGCTCA TTCTGGGAC	7020
TTTCCCTTTC TTTACTAATT GTGCAATTT TAACTCCATG CGAGGAGTTT CTTCATCTTT	7080
ACGGAACATT TCTAGCAAAA GATTTTTATC TAAAGTTGAC ATCTTCTTGC CTTCCTAAT	7140
TTCTTCTTAC CTACTATCT TACCGCTTTT GGCAATACT GTCAAAGTTT TTCTAAAAGA	7200
AATTCACAAA AATAAAAAAG AAAACCCCGT GAAACAAGG GATTTCCTTG TCAAGAATAT	7260
TTTTTCACAA ACTTTTTCAG ATTGGATTT TGCTAAGAT TCAATCTCT TCAATATCAC	7320
AGTTAAACGC CAACGGTAGA GCGCCCGGCT CACAATCAA CTAATATCA AGCCGATCCA	7380
GTAAGAATAA GCTCCAAAT CTGTTAGGGA ATCAATAGC GTATCACAGG GATTGCTACG	7440
CCCCAATAAC CAAGCAAAAC AAGGTAAAAA GGAATAACTG TATCCTTATA CCCCCGCAA	7500
ATTCCCTGAA GCGGCGCCGC AAAGGTATCT GCTAACTGGA AGAAAAGACT ATAAGTTAAA	7560
AAACGCAGTG TCAATCGAT AAATTTTGGG TCGTTACCAT AAAGACTGGC CACATTTCCC	7620
CTAAAAATGT AAAGGAMGT TAAGGTGAAG GCGCAAAAA TGAGGGCAGT CCATCTTCTT	7680
AGACCAATAT AGGTTTTGCG ATCATCAAT CCGTTGGCTC CCATTCATA GGAAACGACA	7740
ATAGCCATAG CCGATGAGAT ACTCATAGGA AAGCGGTACA TAAGACTTGA AAAGTTTATA	7800
GCTGACTGCT GACTAGCTAT AATCAAGGGC GAAAACTTAG CCAATATCAA GCCAACCACT	7860
GAAAGATAG CCACTTCCGC GAAGACAGTT CCCCCAATG GCAGACCTAA ACCAACTCTC	7920
TCCTTAATTT TATCCATATT AAGTGGAAAT CGTTTCTCAA GGTGTAAAGC TTTGAGCTTC	7980
TCCTGTTTAA ATAAACCAG AACAGAAATC CCAAGCAAGA CCGCATAGGC CAAGGATGTT	8040
CCTAAACAGC CACCGACCCC TCCAGTTCT GGAACACCAA AGGCACCGTA AATCAAGAGA	8100
TAGTTAAATC CGCTATTGAG AGGGAGTAAC AAAAGCATGA GGTACATGGA CAGTTTGGTC	8160
AAGCCACAGC AATCCAGCAA GGAACGATG ACGCTAAAGA GCAACAAGGG GATAATCCCG	8220
ATAGATAAAA ACCAAAGATA GCGAACCGCT ACTGCCGCTA CTGCTGCTTC TAACCCATA	8280
TGATTCAAGA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAAC AGATAGGCC	8340
AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCCTTTTT GCCTCGACCA	8400

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AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAAATCC CTGTTAGAAA TCTAAAGAAA 8460  
GGATTTCAGA TACGGGTGCG CATAGATACA CCAGCCAAAGT CCATAGTGTT GTATTGACCT 8520  
GTCAATTGCGAG TATCAACAAA AGAGGCGAGAA TAATTGGCAA ATTTGTAGAT CAGGATTGGG 8580  
AAGAAATTTT TTAATAATTA TACTAACTTC TCTCGTAAC ACITTTGCTT ATACATACTT 8640  
CTCTTTCTAT TCTGATTAT CTAAACCAAA GAGTTTCAGA CCATAGTTTT TCAAACTTAG 8700  
CGGAGGTTTA TTAGATTTTG AAGTAGTATG CCAACACGCA CATGTACGAC AATAATAGCT 8760  
TCTAACTAAA CCTCCGTTAT CATATTGAAC CGCATGGTCA GCTTTTTCTT TAGTTTCATA 8820  
TTGAATTTTG GAACGATTAG CTGCGGAGCA GTAATTTCCA CTATTAGATT TCGCTTCTCT 8880  
CTCCCTACGT TTTGAAAAAT AATTCATATT CTAATCTTA TCAAGCTGA TAGACGATTT 8940  
GTCCCTTACA GATGGTATAT TTAACCTGCC CTTTTAAGGT TTCACCGATG AATGOTGAAT 9000  
TAGCTGCTTT GGAAGCAAAA TGGGAGTCCA CAAGCGGTC AGCCTGGCA TCAAAAAATAG 9060  
TGATATCTGC TGGACCAATC TCAGCCAAAT AACCTGCTTC AAAGTTGTA AGCTTGCTG 9120  
GOTTGTATGT CATTTTTC AATAATTCCA TCAAGCTCAA CTCACAGCT TCTACTAAAT 9180  
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GATTCATCTT AGCATTGCTA CTTGTGTTA AAAGAAGTGC TTCTGCTTA GAGAAATGCT 9420  
GTGGCGCTAC TTCTGCTG ACCTCTGCAC CTAACCCCTG AGCAAACTCC ACTACTTTAA 9480  
CACTTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGITGCA TAGGCAATCA 9540  
TGACATCAAG CGGCATATA GCGTACTCAG CCACCCAGT AGCACCGCAG ATATGGAAAT 9600  
GTTCTCTAGC AATATTTTCA TTAAGGCCAA GAACACCGTT CAAACCTGGA TCTTCTCTAT 9660  
GAAGGCTGAT AAAGGTATG AGTTTTTTGG CTTCCTCCAT GGCTTCTCTG ACAATCTTAC 9720  
TGCTCTCAAG CGGAATACCG TCAATCAGAGA AACCAACGCG ACCAGCTTCT AAGAGTGCT 9780  
TAAAGTCAGT CAAGTTTTTA CCATTAAAGT TTTTAGTAAT GGTGCAACT GTCTTGACAT 9840  
TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCAGC TCTGAAATGG 9900  
TTGACTCTGT ATTAGCCATC ATGACGACAG TAGTAAAC ACCTGCACCG GCTGCTAGGG 9960  
CACCAGTATG AATGCTTCT TTTATGTGTT GACCAGGTC ACGGAAATGA ACATGAATAT 10020  
CGACCAAGCC AGGAGCAACC ACAAGACGAG TAGCATCAAT CGTTTCTGCT CCTTCTCCG 10080  
TGATCTCAGA CGCAATTTTG ATAAATTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT 10140  
CCAAACGAGA CTTGGGATCC ATTACACGAC CATTTTGTAT TAGTAGCATC TGTCTTCTCC 10200

991

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CTGAAAAGAA GGGTTTATCC TCTAAAAGCC ACTCAACAAA GGTGTGGTCA CCTTCCCAAG	10320
TGGGCTTGCT CAAAACCTCA TCATAGGGAA CCCATTCTAG CGTCCCCTCA TTGCAGTCAA	10380
TCAAGTCGCC CTCAACTCC GTCACCTTAA AAACATAGGT GTACCACTCT AAATCTGGTG	10440
TAAATTTCAGG AAAAGTGATG ACACCTTTTA GAACTGGCTT GGCTTTGAGC CCTGTTCTTT	10500
CAAGGATTTT ACAGCGCGCG CATTCTGGG GGGTCTCTCC TCTCTCTAGC TTACCAACCA	10560
CACCAATCCA TTTCCCTTCA TGGACATCAT TGGGTTTCTT ATTACGATGG AGCATGAGCA	10620
GTTCCTTCCC ATTATCAATG TAGCAATCG TCGCTAAGT AGGCATATTT TCTCCTTATC	10680
TAAAGCCAATC GATTGGCTCT TGTCTGTCT CTTTTAAGAA TGCATTGGCC TTGGAAGAAG	10740
GCTTGGAACC CCAAAATCCT CTATAAACCG ACAAAAGACT TGGATGGGCT GATTTCGATAA	10800
TCAAGTGATG AGGATTGGTA ACTAATGCTT TCTTCTTACG TGCATAAGCT CCCAGAGTA	10860
CAAAAACGAC TGGTCTATCT AGATGATTGA CCACCTGAAT CACAGCATCA GTAAAAGGCT	10920
CCCAGATTG ACCAGCATGA CCATTGGCCT GTCCAGCAGG AACAGTCAA CAAGCATTAA	10980
GAAGCAAGAC TCCTTGCTCA GCCCAAGCTG TCAATCATG AGATTTCTTA ACTCCGATAT	11040
CATCTGACAA TTCCTTCAAG ATATTTTGCA AGGATGGTGG AGCTGGGATA GAGTCAGGTA	11100
CAGAAAACT CAAGCCCTGC GCTTGACCTG GTCCGTGATA GGGGTCTTGC CTAGAAATTA	11160
CCACCTTAAC TTCCTCAAGC AGTGTTGTCA AGAGAGCTG AAAAACTTT TCCTTGGGTG	11220
GATAAATAAT CCCCTGAGAA TAGACCTGCT CCATAAAGT ATTGATTTC CCGAAATAAC	11280
CCTCAGGTAA TTGCGCCTTA ATCAAAAGCAT GCCAAGACGA GTGTTCCATA GCCGACTCGG	11340

(2) INFORMATION FOR SEQ ID NO: 148:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12127 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

AAAAAATAGA CTTGTTAGAC TATAAATGTA GTAAGCCTAC ACAAGAAAAA TACATAGAGA	60
TAAAGGTGAT TATTATGAAA TTCAAAAAAA TGCTTACTTC TGCAGCCATT GGCTTATCAG	120
GATTTGGGCT TGTTGGCTGT GGCAATCAGT CAGCTGCTTC CAAACAGTCA GCTTCAGGAA	180
CGATTGAGGT GATTTCACGA GAAATGGCT CTGGGACACG CGGTGCTTC ACAGAAATCA	240

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CAOGGATTCT CAAAAAGAC GGTGATAAAA AAATGACAA CACTGCCAAA ACAGCTGTGA	300
TTCAAAATAG TACAGAAGGT GTTCCTCTCAG CAGTTCAAAG GAATGCTAAT GCTATCGGCT	360
ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG	420
CTAGTCGAGA CACAGTTTGA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATGTTTT	480
GGTCCTCTTAA TCTTTCCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG	540
GTCAACAAGT GGTACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA	600
CAAGCCAAACA CTTATCAGGC AAGTTGTCTG TTGTAGCTTC CACTTCAGTA TCTTCTTTAA	660
TGGAAAAATT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT	720
CTAATGGGTC TTCAGCAGGT ATTACCGCTG TTAAGGAGAA AACCGCTGAT ATTGGTATGG	780
TCTCTAGGGA ATTAACCTCT GAAGAAGGTA AGAGCTCAC CCATGATGCT ATTGCTTTAG	840
ACGGATTGCG TGTGTGTGTC AATAATGACA ATAAGGCCAAG CCAAGTCAGT ATGGCTGAAC	900
TTGCAGACGT TTTTGTGTCG AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT	960
CCATAAATCT CTAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA	1020
GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAACAAG	1080
CCTTCAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTGTTGTAG	1140
CTAATTGTCT AATCTGTTTC TTTATTTTAA GTAAATGGCTT ACCTTTTATA GCTAACTACG	1200
GCTTTGCCCG TTTTTTATTA GGCAGTGATT GGTGCGCAAC GAACATCCG GCAAGCTATG	1260
GTATTTTACC AATGATCGTT GGTTCCTTAT TAATTACCTT AGGAGCGATT GTGATTGGGG	1320
TGCGAACAGG CATCTTGACA TCGGTGTTTA TGGTTTATTA TTGTCCAAAG CCGTCTATG	1380
GCCTCTTAAA ATCAGCTATC AACTTGATGG CAGCCATTCC ATCTATTGTT TATGTTTTTT	1440
TCGGCTTACA ATTATTGCTG CTTTGGATTA GAAGCTTTTT AGGAANTGGG ATGAGTGTC	1500
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CTGCTATCCG AACAGTTCCC AAAACGTATT ATTCTGGTAG CTTGCTCTA GGAGCTAGTC	1620
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ACCAGCCGAT TATTCCAAGT GGACTCTTTT CAGGAACCAAG AACCTTAACA ACCAATATTG	1800
TTCTGGAAAT GGCTTACGCA TCAGGTCAGC ATAGGGAAGC CCTTATTGCA ACCTCAGCAG	1860
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CTTATGAGTA AATACCTGCT AAAACTTCTC GTTATTGTT TTTACGCTTT AACCTTTGGC	1980
TCTCTCTTTT TAATCAATTGG TTATCTCTC ATCAAGGCTT TACCTCATCT AAGTCTATCC	2040

CTCTTTCTTT	GGACTTATAC	TTCTGAGAAC	ATTTCCCTTA	TGCCAGCGAT	TATTCCACC	2100
GTTATTCTGG	TCCTTGGTGC	TCCTCTTTTA	GCCTTCCCA	TAGGGATTTT	TGCTGGTTTT	2160
TATCTTGTGG	AATATACAAA	AAAAGATTCC	CTTTGTGTTA	AAATCATGCG	ATTGGCCTCA	2220
GATACCTTAT	CTGGGACTOC	TTCCATTGTT	TTTGGTCTGT	TGCGCATGCT	CTTCTTTGTA	2280
GCTTCTCTAG	GTTTTCAATA	CTCTCTGTTA	TCAGGAATCT	TAACCTCAGT	TATCATGGTG	2340
TTGCCAGTCA	TTATTGCGTC	AACAGAAGAA	GCCCTTTTAT	CTGTTAGTGA	TAGCATGCGT	2400
CAAGCAAGTT	ATGGACTTGG	GGCAGGTAA	TTACGGAGCT	TTTTTAGAAT	TGTTCTACCA	2460
GTTCGCATGC	CAGGTATTTT	AGCTGGAGTG	ATACTAGCTA	TTGGCGGTAT	CGTTGGTGAA	2520
ACAGCTGCCC	TCATGTATAC	ATTAGGTACC	TCACCAATA	CGCCAAGTAG	TCTCATGTCT	2580
TCAGGCCGTT	CTCTAGCCCT	ACATATGTAT	ATCTGTCAA	GTGAGGGGCT	ACATGTCAAT	2640
GAAGCCTATG	CTACCGCGCT	GATTTTGATT	ATTACTGTTT	TAATGATATA	TACTCTATCA	2700
AGCTTATTTAT	CTCGAAAJCT	TGTGAAAGGA	GCTTCCTAGT	ATGGGAACAT	TTTCAGTTCAG	2760
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AGAAAGACAG	ATTACTGCCT	TGATAGGCC	ATCTGGTGTG	GGCAATCAA	CTTTTCTAAA	2880
AACCTTAAAC	CGGATGAAAG	ATTGGTTTCC	TTCTTGCCAT	ATTGAAGGCC	AAGTCCCTTT	2940
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GATGGTTTTT	CAACAGCCTA	ATCCCTTTGC	CATGTCTATC	TATGATAACG	TGGCTTATGG	3060
CCCAAGGACA	CATGCTATTTC	GAGACAAAAA	ACAAATAGAT	GCCTTAGTGG	AGAAATCTTT	3120
AAAAGGGGCA	GCCATTTGGG	AAGAAGTCAA	AGATGATCTT	AAAAAGAGTG	CCATGTCCCT	3180
ATCTGGCGGT	CAGCAGCAAC	GCCTTTGCAT	TGCGGAGACT	TTAGCAGTAG	AACTGATAT	3240
TCTGTTAAATG	GATGAGCCGA	CTTCAGCCTT	AGACCTTATC	TCCACTTTAA	AAATGAAGA	3300
CCTCATTCAG	CAACTAAAAA	AGGATTATAC	GATTAATCAT	GTATCCATA	ACATGCAACA	3360
AGCTTCACGT	ATTTCAGATA	AAACTGCTTT	TTTCTTAACA	GGAGAAATTT	GCGAATTTGG	3420
AGATACCGTT	GACGTGTTTT	CCAAATCCAA	AGATCAGCGC	ACAGAAGACT	ATATTTACAG	3480
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TTAGAACAAT	CTTTTATTAG	ACTAGGGCAA	CTGTCTCTTG	AAACAGCTTC	AAAAGCCTTA	3600
CTGGCCTTAG	CTCCAAAGA	CAAGGAGATG	GCAGAGCTAA	TTATCAATAA	GGATCATGCT	3660
ATCAACCMAG	GTCAAAGGCG	TATCGAATFG	ACCTGTGCC	GTTCGTGGCG	CTTGACAGCA	3720
CCACAAGTGT	CTGACCTTCG	ATTGTGTGAT	AGCATCATGT	CTTCTTGTTC	AGACCTTGAA	3780



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GATTTATTTGG TTGCCCTTCC TTTCACCAA GCCTCAAAAG CTATTAGTAT TGCTCAAAA	3960
GATGAACAGA TTGACCAATA TTATTATGCC TTATCAAAAG AATCAATTGG ACTTATGAAA	4020
GACCAAGAAA CCTCAATTCC CAATGGAACT CAATACCTTT ATATCATAGG GCATCTGAAA	4080
CGCTCGCTGA TTACATTGCT AACATTGTG AACGCTAGT CTACTAGAA ACAGGAGAAC	4140
TAGTGGATTT GANTTAATTC AACTAATCCT TAAAGAGAA GAGTACGATT AAGTACTCTT	4200
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GGCTGTCTGG CTTATAATCT CTACCTCTTT TTAAAGCAG TAGCTGGTGA TGAAGTAAGT	4440
TCCTTTGATCA TCAAGCGTTT TCGACGCTTC TTCTTCTATA TTGCCGGA AAATATGCTCTT	4500
ACTGCTAGAC GACATATCT CAATTCTCA AGCTATACG CCTATTCAA ACAGTTTCAA	4560
GCCTTATTTG ATACAACTCG CCAGATAAAT CTGATACTCC CTGTTCCATA TAGAGCTAGA	4620
GGGCAGGGGA AAACATGCCT AACAGATAA GTCACCTTAT TTTAAAAATC GAGCATCAAA	4680
CCAAGGAGG AGTCTGCCCC TTTTAGGAA AAAATCAAGA CAAATCTCCT CAATTATGTC	4740
TCGAACATCA GAAATTAAG AAAATCACCA GAAGGACAGT ATTTCAACTA GCCTTTCTGG	4800
TAMTTTTTGA ACTGTGTAGT TCGTGTAGTC CAGATATGAA TAATTGGGA TGATAAATCT	4860
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CTTTTGGCG ATAGTTTCAT CTTCGTATGT AGGAGTCTCT ATCAAGAAAT ACTTCAATTC	4980
TAGGTATTTCC TTATCCAAC CTATATAACT TGGCATCAAC TTGTAATCTT CAACCCCAA	5040
ACGTTCAGCA ATATATTTTA ACTTTGTAG TATTGGTCTG GATCTCTCAT TTTCAATCTT	5100
AATTAAATGA CGGATCTTA ATTCAGACTC ATCAACCACAA AATTCTGAAC GACTGATTTC	5160
TTTAGCCAAA CGTAATCTTT TAATTTTTTC GCCAAACTCT CGCAACCTAC AAGAACTTCC	5220
TGAGTTGTTT ACCTCTATA TAAGCATATA CTGAATCAAA CTATCTATCA GATTTCCTCT	5280
CACCTTAAC TAAAGACTAAG AGTTTATCCC TTGCTCTGG TTTTGTGTA TTTTCTCACC	5340
ATACCCCACT AATGCAAGTG CAAATCCCC TAGAATATGA TAGAATAAGA GAAAGAACTC	5400
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CGTCTAGAC GAAATATCA TTGCCACAC CGACTTAGCA GAAACATTGA AAGATGTGGA 5640

TGCGATTTTG TTGTGTGTC CAACAAAAGT GACACGACTT GTTCCCCAGC AAGTTGCACA 5700

AACCTTGGAC CATAAGGTTA TCATCATGCA CGCATCAAAG GGATTAGAAC CTGATAGCCA 5760

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TGATTCAAAC TTGGAATTGG AATATAACCT CAAAGAAAAA GGGAAAAACAG ATCTTTTGAA 6720

GCTAGTTGAT AAAACAACCT ACATGCGTCT GCATTTTATC CGCCAAACTC ATCCACGCGG 6780

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TGCTCGTGAG TTCAAGGGG CTCGTTACGA TGTCCGAGAC AAGTTTGCTC TCATGAAAA 7260

ATCCATCGAC TACGCCCTCA AACACCCACA AGTCAAGAT GATTGAAGA ATTACCTCAT 7320

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CCAACTTGGG AAGGAATTGA CTGAGAAGGA ATACCAAAAT CATTATATA AAGATTAGCC	7380
ACACATAAAT TAAGTAATAT CTCTACTTGA ATCTACCTAT TTAATAAAAA CTAAATGAAAA	7440
CGCTATACTT GTATTGTGTT TTTCATTAAT ATAAGAGTAG AATAAATAG TATAGTAAAA	7500
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AACCTTGTCTA TGTGTGTTCT AATGGTTCCA AAATAATAAA TAAATTTAAA TTGACTTAA	7620
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TGGATGGTAT TCATATAACC AACACAAAG AGAACAACAA GCAAAAATTG TACAATTAGA	7920
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TTCCAGATGAA TCTATTTCTA AATTAAAAGA ACTACTGAA ACTTCACTTA AAACCGATCC	8040
AGGTAAAGAC TATCTTAATA ACAAAAGTCAA AGAATCATCT AAAGCAATTG TAGATTTTCA	8100
TTTGCAAAAA GTTTTGCTTT ATGATGTTAA AGATTGAGT GACAAATTTA AAGATAAAGC	8160
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TAAATATCAA AAACAATATG AACTTTTGAA GAAAGAGAA GAAAAAGCTG CTGAAAAAGC	8340
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GTCTTATAAT GGATCTTCCA ATTCAAATGT AGATTATAGT TCATCTGAAC AAACTAATGG	8460
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ATATAAAGC ACTGGTGTG ACGGCTATCA AAGATACTAC TACAAGATC ATAAATAATGG	8640
AGATGTGTAT GATGACGATG GAAATTACCT TGGGAACTTT GGTGGCGGCA TTGCAGAAC	8700
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AAATTCAAAT TCAACACAG CTGACATCTG CTTACCGTAG GTATGGTTAC TGACTTCGTG	8880
AGTTTCACTCT ACAACCTCAA AACCATGTTT TGAGCTGACT TCGTCAGTTT TATCTACAA	8940
CTCAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCTTA GTTTGCTCTT TGATTTTCAT	9000
TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCTACGA	9060
ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTATACAT CCGTTTTTCT CCTCTAACTG	9120

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 TTCTCGGAAT CAGAACACTT CCAATAATGT TAACCACAAA AAGTCTCAGA TAGGATTTGCC 9240  
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 GCCCATAAAG AGAGGTAGAG GCGCCTGCTG CTAAGGATTT AGGACTAAAT ACAAACAA 9360  
 AGAGATTTGCC CATCATTTCTT GATAAAGAT AGAGAAAGAA AAATCTGTTA GAACGAAAA 9420  
 TCTCCTCTAC CTGCTCTCCA AGATAATAAA GTGAAGCAT ATTAACAATG AAATGTTCCC 9480  
 ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAACC CTGCTCGGGA AAGAGGCGAA 9540  
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 TGGTTTTCAG GTATAAGTC CTGAATTTGA CAAGATATA TCGTACTCAA AGTAGACCA 9780  
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 GTGTTAAAG CCAGCACCAG AACATGAATC AAATCAATCT GAGATGCATC CACCACTTCC 9900  
 AAATCTCCCT GTAGCTCCAG TAAGGCAAG AAAGTTTTTA CCAACTGTTG CGGATCATAG 9960  
 ACCACAAAGT CCATGCGCCC CTTGGGATAA GTTTTGGGTA TAAAAACCTT CTTCGCCGCC 10020  
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 TCTATAGCCT GTTTTGCTC TTGAGATATA GCCTTCATTT CATGCAAGAC TTGCTTCCGT 10200  
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 CAAAGAATGC CATCAGTTCA GCGGCCAAG CTGGATTGTT CTCACAGGT AGGTATCCAC 10500  
 CTGTGTTTGA TTCCACTTGG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG 10560  
 TTTTATACCT CTTTTGCACC AAGAGACTCA TGTCTGTGT CAAGGCAAGA ATAGTTCCAT 10620  
 GTAAAAAAGC TGTGTCTGTG ATGACATTGT TGGTGTTCG AGCTTGAAAA ACGCGAAGG 10680  
 TCACCACATC TCCCTCGATT GGGTTGACAT TGCAGCTAAC AACTGACTGC ACTTGGTCA 10740  
 CAAAGTAAT AGCCGCCACC AAGGCGTAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC 10800  
 CTTTGCCTTT GAAACGATC TTCACCTCGC AAGTTCTTGC AAAGAGTGTA TGAGTATTAG 10860

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TCCCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA	10920
ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTTCTTCAG	10980
CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTCCTC CTCAAAGGGC CGCTCAAGAC	11040
ACCTTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTG	11100
GAGAAACAAA AGGTAGACCT GTTGTGTGGA CGATAGCGAG GCCATCAATA TCTGTCCGCC	11160
AACCAATGGT TCGCTCCGGC TGACTTCCCT GCAGGTAGAC CAAAAATCCCT GTCCGCCAAG	11220
TACGAATTGG AACAAAATCC TTGCGCGTAG TCAATTTCTC AATCACATCC AGCAAAATAG	11280
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CGATTTTCAG CACCGATATT GATAACAGAT CCCATCATGA TAACAGCATT GTCACCAATT	11820
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AGCAAAAGAA CTGCAGAAAT ACGAGCATCT TGCTCGACAA CATATCTTG ATTTTCTACC	11940
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ACAACAGAGC TAGGCACAGC AGTTGCGAGT TGCCCCCAA AGGTTACTTT GACACTGGTT	12060
TTCTTTTCAG CATTTGGCGAT AAATTGGATA ATTTCTTGAG CTTCAATTTT TGTAGCAGTC	12120
ATAGGTG	12127

## (2) INFORMATION FOR SEQ ID NO: 149:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 12566 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

CCATCTTCT GTTGATGTGA CAGGAATGAT GATAATCAA CCAAGTAGTA GTCGCGAAGA	60
GGTGACAGAC GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT	120

CGTTGAGCCA AATGAAGCTG GAGAAACACG CTTTACCTAT GCCACTTATG GTGAGGGAAA	180
GCTTCCAGAA GGTCTGACCA TTCTCTCCAA GGAGAGTGCA GAAACGAGTG ATTTATTAGG	240
GTCTTACTTG ATTGTATCAG GAAGTTTGGG TGGAGTGAGC TTACAGACCA CCTTGAAGA	300
GCTTGGTAT CAAGCCTTTG TTTCGAATGG AGAAGATCCA TTTTCGATAG TCTTACTATT	360
GACGGCCACC CCTATGCTGC TACTGAGTTT AGCTATTTTT CTGCTGACCT TTATGAGTCT	420
GACCTTGATT TATCGGATCA AATCCCTTCG TCAGGCAGGG ATTCGCTTAA TAGCTGCTGA	480
GACCTTGTTT GGAGTTGCTC TCAGACCAGT GTTAGAAGAT GTGAGACAGC TTATCTGCTC	540
AGTGTGTGTA TCCAGTCTTT TGGGATTGGG GATTCTCTGG TATCAAGGTG CCTTGTTTAT	600
GGCAACGGTG CAACTGCTCA TCATTGCTCT TCTACTTTAT GGATTGACCT TGGCAGGGAT	660
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ATTGAAGGG AAACCTCCCTC TCAAACGTAT GATGACATTG ATGATGTGAG GGCACCTCTT	780
AGCTGTATTG GTGTCGGAT CGAGTGGGAC AGCTCTCCTA CCCCACCTACC GTGAAATGCA	840
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GACATTTACT GAAGAACGGT TAGCCAATAC AGACTCTTTT TATATTATGA GCAATGTTGA	1020
CAATTCTCA GATGGAGCAG AAGTGGACCT AGATGCCAAT CGTCTCACTG ACTACACACC	1080
GTGAGGGAT GTTATCTATG TCTCACCGCG CTATCTGATA GAAGAAAAGA TTACCGTTTC	1140
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TGAGAGCTTG CGAGAGCAGT CTGTCTACTA CCAAGGATTG TTTACAGATT AACTGCAAAA	1260
CTTTTCATCT GAAAGTGTAG AAGTGACGAG TCAGAAACAC TACCTCCCAC AGGTARGGCT	1320
AGCTTTTACA GAAACAGGAC AGGAACGTTT CCTCTATAAT GATGGGTACA AGACAACAGC	1380
CCAGTACCTA AAAGATCCGA TTATTTGAGT TCTAACGCCG CAAGCGACTG GAACAAGACC	1440
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AGACAGCATC ACAGCTCTAA AAGAGAAAGG TCTGTATCAC AAGGTTTCTT ACTTGGTAAA	1560
AAGCCAGCTA TTTTTCGCCA AGGTACTAAA TGCAAAACGG GTGGAGTTT ACTCTCTCCT	1620
TATTGGACG ATTTTGACCC TGCTACGGC TATCTTGTTA TTTGATTCCA TGAATCTTCT	1680
CTATTTTGAG CAGTTCAGAC GGGAACTTAT GATTAAACGT CTGCTGCTGA TGACAATCTA	1740
TGAGCTTCAT GGCAGTATT TACTGCGGCA AGGAGGAGTT CTCCTGCTTG GCCTAGTCCT	1800
ATCTAGTATT TTGACAAGAG ATGGTTTGAT TAGCGCTCTA GPTGTAGCTT TGTTACGCT	1860

1000		
TAACGCCCTC TTGATTTTAG TAAGCCAGGA CAAAAAGAA GAAGCTGCTA GCATGGCAGT	1920	
ATTGAAAGGA AAATAAGATG ATTGATATTC AAGGATTGGA AAAGAAATTT AATGACCGCG	1980	
CGATTTTCTC TGCTTTGAAT CTCAGCTGG AGAAGGGCAA GGTTTATGCC TTAATCGGAA	2040	
AGAGTGGGAAG CGGAAAGACG ACGCTGCTGA ATATCTTGGG AAAGCTAGAA AAGTAGATG	2100	
GTGGGAAGGT TCTCTATCAG GGAAGATTT TAAAAACCAT TCCCACTCGT GAGTATTTTC	2160	
GAGACCAGAT GGGCTATCTC TTTCAAATTT TCGGCCTCTT AGAAACCAA TCAATCAAAG	2220	
AAAATTTGGA TTTGGGTTT GTTGGTCAGA AAATCTCAA AGTAGAACGT TTGGAAAGGC	2280	
AAGTGGGGC TTTGAAAAA GTTAATCTAG GGTATTTGGA TTTGAAACAA AAAATCTATA	2340	
CTTTATCTGG GGGAGAGGCC CAACGAGTTG CCTTGCTAA GACTATTTTG AAAATCCAC	2400	
CCTTGATTTT GGCAGATGAA CCAACAGCAG CTCTTGATCC TGAATAATCA GAGGAGGTTA	2460	
TGAATCTCTT GGTGGATTG AAAGATGAAA ATCGAATTAT CATCATTTGG ACCCATAAAC	2520	
CCCTAGCTG GAATAAGGCT GATGAATCA TTGATATGAG GAAACTTGCT CATGTGTGTA	2580	
AAAATCCGTA TTCCGAGGCT ATCTGATTAT CCTAGTGCCA GAGGTGGTTT AGAAGATATC	2640	
CTCATCATGG AAAATATGAC CAATCATCTC CTTTTGGTTC AAATCCGAGT GCATGGCTAT	2700	
TTGCTTGATT TTGCTAGTAT TGAAGGCCAA AGGCAAAAGC ATTTATCGTTT GAAAAATTTA	2760	
CCTCAGACGG TTGAATGAC AGTGGATGAT GTGGAGGAGG ATGTGGATTT GACCCATCCT	2820	
GAAATCGAA GTTATCAAGA AGCTGATTTT TTTGAACGCA TGTTCGAGA GAACTGCTAA	2880	
GGCCACTTTT AAAGATTTC AAGACTATCT TTCTTCATGA GGAAGATAG TTTTITGGTA	2940	
TGATTTTTCAT TCCCAAAATA CAAGGGGAAT GTGTACAAAT AGTAGTAACA GATAATAGAA	3000	
AAGAGAATAG ATGAGAATTG CAGATTATAG CGTGACCAAG GCAATGCTG AGCTGACCGG	3060	
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AATTGTGGAT ACGGCTGAAA TTGATGATCA GGTCAATGTC ATCGAAATCG GGCAGGTAT	3180	
TGCTGCTTGG ACAGAATTTT TGGCTGAGCG TGCAGCCAA GTCATGGCTT TTGAGATTGA	3240	
CCACCGTTTG GTGCCAATTT TGGCAGATAC CCTGCGTAT TTTGATAATG TGACCGTAGT	3300	
TAACGAAGAT ATCTCAAGG TTGATTTGGC GCAACATATC CAGAATTTTA AAAATCCTGA	3360	
CCTGCCAATC AAGGTAGTGG CTAAATTTGCC TTACTACATC ACGACGCTA TTCTCATAGA	3420	
CTTGATTGAG AGTGCCATTC CTTTTGTGA GTTTGTGTC ATGATGAGA AAGAGTAGC	3480	
GGACCGCAT TCCAGCCAGC CTAAACCAA GGCTTACGGT AGCTTGTCTA TCGCCGTGCA	3540	
GTATTACATG ACAGCCAAGG TTGCCTTTAT CGTGCCCTGT ACGGTCTTTG TGCCAGCGCC	3600	
AAATGTGGAT TCAGCCATCT TGAATAATGT GGTGCTCCA GAGCCAGCGG TAGCAGTAGA	3660	

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AGATGAGAAC	TTTTTCCTTFA	AGGTTTCCAA	GGCTAGTTTTF	ACCCATCGCC	GCAAGACCTT	3720
GTGGAAATAC	TTGACAGGTT	ACTTTGCTAA	GACTGAAGAG	GTCAAGGACA	AGCTGACCAA	3780
GGCTTTGGAC	CAGGCAGGCT	TGTCACCAAG	TGTGCGTGGG	GAAGCTCTCA	GCTTGGCAGA	3840
ATTTCGCGGT	CTAGCAGAGC	CACCTTAAAG	GCAAGGACTC	TAAGATGCAG	GGACAAATCA	3900
TTAAAGCCCT	GGCAGGTTTC	TACTATGTGG	AGAGTGAATG	CCAGGTTTAT	CAAAACACGG	3960
CGCGTGGGAA	TTTCCGTAAA	AAAGGCCATA	CCCTTATGTT	TGGGGACTGG	GTAGATTTC	4020
CTGCGCAGGA	AAATTCAGAA	GGCTATATCC	TCAAATTTCA	CGAAGCGAAA	AACAGTCTGG	4080
TTCTGTCGCG	TATTTGTCAA	ATCGATCAAG	CTGTAGTAA	CATGTCCTGC	AAGGAACCTG	4140
ATTTTAACAG	CAATTTGTCT	GATCGTTTCT	TGGTTCTTTT	GGAGCACAAG	GGCATCCATC	4200
CCMTTGTCTA	TATTTCCAAA	ATGGATTGTG	TGGAAGATAG	GGGAGAACTG	GATTTTATCC	4260
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TGTTAACAGG	CAAGGTTACG	GTCTTTATGG	GGCAGACAGG	TGTTGGGAA	TCAACTCTTC	4380
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GGGTCGCGCA	TACCATCTGA	GCTGTATAGT	TTTACAATCT	CAACGGGGGT	AAATTCGCAG	4500
ATACACAGGG	ATTTTCATCC	TTGGACTATG	AAGTATCAAG	GGCTGAAGAC	CTCAATCAGG	4560
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GCAGTGTGGG	TCGAGAGCCT	TGCTCCTCAT	AGTAAGATGG	TTTTCGATTC	CCACTTCGATG	4980
GTGTCAAACC	CTGAGCATCA	TCGTGAAGAT	TTTGCGCGTG	CAGGTGCAGA	CATCATCAGT	5040
ATCCATGTGAG	AAGCAACGCC	TCATATTCAT	GGCGCCCTCC	AAAAAATTCG	TTCACTCGGA	5100
GTTAAGCCTT	CAGTCGTAT	CAATCCTGGC	ACATCAGTTG	AAGCCATCAA	GCAGTCCCTT	5160
CATCTAGTTG	ACCAAGTTT	AGTCATGACG	GTAAATCCAG	GTTTGTGTGG	GCAAGCCTTT	5220
CTGCCAGAAA	CCATGGATAA	GGTCCGTGAG	TTGGTTGCTC	TTCTGTGAGG	AAAAGGTTTG	5280
AACTTTGAAA	TCGAAGTGA	TGGTGGGATT	GATGACCAAA	CTAATTGCTCA	AGCCAAAAGAA	5340
CCCGGTGCGA	CTGTTTTTGT	AGCAGGTTCC	TATGCTCTTA	AGGAGAAAT	CAATGAGCGA	5400



1002	
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TCATTATCGG ACAGATTTTG ATGCTTTTGT TGGGTGGAAT CGAGGCTCGC TCTGGGTCTT	5520
GGAAGAAGAC TTACCTCTTG CTCTAGCAGT CGAGATTTT GATTCTGTGA CGGAAGAAGA	5580
CGCAGAGTGT ATTCAAAAAG GTGCCAGTA TTTTGTCCAA GCACGACCAG AAAAGGATGA	5640
TACAGATTCT GAATTGGCTC TCTTAACCAT CTTTGACAAA AATCCTCAGG CTCAGGTAC	5700
TATTTTCGGT GCCTTGGGTG GCGTATTGA CCAATATGTT GCCAATGTCT TTCTGCCTAG	5760
CAATCCTAAG TTGGCACCTT ATATGCATCA AATAGAAATT GAGGATGGC AAAACTTGAT	5820
TACTTATTGT CCAGAAGAA TCAGTCAGCT AGAACCTCGT TCAGACTACG ACTATCTAGC	5880
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GGAAATTTT TCTTTAAAA AAGTGACGC TTCTAACGAA TATATAGATA GGAAGTGTG	6000
GGTAACCTGC CCAGATGGTT ATGTGGTCGT ACTGCATAGC AAGGACAGGA GGTAGGATGG	6060
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CAGACCAAGT GGATTACCGC TTGTACCAAG CCAGACAAGC CAGCCAGTTA GACCAAAAAG	6240
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TGACCCAAAT CCGTCAAGAA ATGACAGATA ATCTCCTCCA AACTAGAGAC AAGACAGACC	6360
AACGTCTCCA AGCCTTGCGG GAATCAAAAT AGCAACGTTT GGAACAAATG CGCCAGACGG	6420
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CTAAACAACCT GGAATCTGTC AATCGTGCC TGGAGAAAT GCAGACAGTT GCCCGTAGTG	6540
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CCAATTTTGG AGTTTGTGTT GTTCCGACAG AAGGCTCTTA CTCAGAAATC GTCCGCAATC	6960
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TATCAGCCCT TCTTAACTCC CTATCAGTTG GTTTCAAGAC CCTTAATATC CAAAAGAGTG	7080
CGSACCATAT CAGCAAGACT CTTGCCAGTG TCAAGACGA GTTTGGCAAG TTTGGTGGTA	7140
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ACCGCTGAC	CATAGCTATC	GAGCGGACGC	TCCGTACAT	TGAGTTGTCA	GAAGGTGAGC	7260
CTGGCTTGA	TCTACTCCAT	TTTCAAGAAA	ATGAGGAAGA	ATATGAAGAT	TAGTCACATG	7320
AAAAAGATG	AGTTATTIGA	AGGCTTTTAC	CTAATCAAAT	CAGCTGACCT	GAGGCAAACT	7380
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AAGCTCTGG	ATGCCCAACC	TCATAACATT	GAGGCTTTTA	CGCAGGTAA	GGTGTCCAC	7500
ATGAAAGGAC	GCGGAGAAGT	TTATAACAAT	ACCCCTCAAG	TCATCAAAAT	TACTCTCCGC	7560
CTGCCTCAAG	CTGGTGAACC	CAATGACCCA	GCTGATTTCA	AGGTCAAGTC	ACCACTTGAT	7620
GTCAAGGAAA	TTCTGTACTA	CATGTGCAAA	ATGATTTTCA	AAATTGAAAA	TCTGTCTGG	7680
CAACGGATTG	TCCGAAATCT	CTACACCAAG	TATGATAAGG	AATTCTACTC	CTATCCAGCT	7740
GCCAAGACCA	ACCACCATGC	CTTTGAAACG	GGCTTGGCCT	ATCATACGGC	GACCATGGTG	7800
CGTTTGGCAG	ACGCTATTAG	CGAAGTTTAT	CCTCAGCTCA	ATAAGAGCCT	GCTCTATCG	7860
GGGATTATGT	TGCATGACTT	AGCTAAGGTC	ATCGAGTTGA	CGGGGCCAGA	CCAGACAGAG	7920
TACACAGTGC	GAGGTAACTT	TCTTGGACAT	ATCGCTCTCA	TTGATAGCGA	AATTACCAAG	7980
ACAGTTATGG	AACTCGGCAT	CGATGATACC	AAGGAAGAAG	TCGTTTTGCT	TCGTATGTC	8040
ATCCTCAGTG	ACCACGGCTT	GCTTGAGTAT	GGAAGCCGAG	TCCGTCCACG	CATTATGGAA	8100
GCAGAGATTA	TCCATATGAT	TGACAACTCG	GATGCAAGCA	TGATGATGAT	GTCAACAGCT	8160
CTTGCTTTGG	TGGATAAAGG	AGAGATGACC	AATAAAATCT	TCGCTATGGA	TAATCGTTC	8220
TTCTATAAAC	CAGATTTAGA	TTAATAATTT	AAGAAAAATG	AGCATTTTTT	AGGATAAGAA	8280
TGTTCTGTTT	TTTATGTGAA	TATGGTATAA	TAGTAAAAAG	ACAAAAATGA	ATACTCTTCG	8340
AAAACTCTCT	CAAACTAGGG	TAGTATCGCC	TTGTGCTATG	TATATATGCA	GGTATATTAC	8400
AGGGTTTGTG	AGTTCTATTG	ACAATCTCAA	AACAGTGTTT	TGAACCAACA	GCGACCAAGT	8460
TTCTAGTTTG	CTTTTTGATT	TTTTGAATAA	AAATGGAATA	GGAAATAGAA	ATGAAATTAA	8520
GAAGAAGTGA	TCGGATGGTT	GTCAATTCCA	ACTATTTGAT	TAATAATCTC	TATAAATCAA	8580
CTAGTCTCAA	TACTTTTGCT	GAAAAGTATG	AGTCTGCTAA	ATCATCCATC	TCAGAAGATA	8640
TCGTCTTAT	CAAAACGGCC	TTTGAGGAAA	TTGAATCCG	TCATATCCAG	ACAGTGACTG	8700
GGGCTGGCGG	AGGTGTCTAT	TTTACACCGT	CTATTTTCGAG	TCAGGATGCT	AAGGAAATGG	8760
TTGAAGACTT	GCGTACCAAG	TTGTGAGAAA	GTGACCGTAT	CTTGCCAGGT	GGTTATATCT	8820
ATCTGTCTGA	TTTGTCTTAGC	ACACCAGCCA	TCTTGAAAAA	TATTTGTCGT	ATTATTGCCA	8880
AAAGCTTTTAT	GGACCAAAAA	ATTGACGCGG	TTATGACCGT	AGCAACTAAG	GGTGTGCCAC	8940

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TTGCAAAATGC AGTTGCCAAT GTCTCAATG TCTCTTTGT CATTTGTGGC CGTCACTGA	9000
AAATTACCGA AGGTTCAACT GTTAGCGTCA ACTATGTTTC AGGTTCAAGT GGTGACCGTA	9050
TGAGAAAAAT GTTCTTTTCA AACGTAGTC TTAAGGCAGG CAGCGTGTC TTGATTGTGG	9120
ATGACTTCTTT GAAAGGTGGC GGAACGOTCA ATGGTATGAT TAGTCTCTTG CGCGAGTTGG	9180
ACTCAAGAACT GGCAGGTGTA GCGGTCTTTG CGGACATGCG CCAAGAAGAA CGTGAAAGC	9240
AGTTTGACTA CAAGTCACTC TTGAAGGTAA CCAATATTGA TGTCAAGAAC CAAGCCATCG	9300
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CGATTGTCCC AGCCTTTCTT TCGAACGAGA ATAGAAGGAA GCTTATGAAA ACACCATTTA	9420
TCAATAGAGA AGAGTTAGAA GCGATTGTGT CCGAGTTCCC GACTCCCTTT CACTGTATATG	9480
ATGAGAAGGG GATTGCTGAG AAGGCAAGAG CCOTCAACCA AGCTTTTTTCG TGGAAACAAG	9540
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ACTCTCTCCT AGCCTCCAAAT ACCGTGACCC ATCTCTATTA TCCAGAGTTG GCTCCTCAGC	10020
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GAGTCATCTA TAAGAAGGAA ACCTACCGTA CCTATCTAGG TGTGGATGCC TCAGCAGTCA	10320
ACCTCATGGC TCCAGCTATG TACGGAGCTT ACCATCATAT TAGCAACGTG ACCCATCCAG	10380
ATGACCAAGC TGAAGTGATA GATGTGGTGG GTTCACCTCG TGAAGCAATG GATAAATTTG	10440
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TTGCACACTT ATATGGCTTC GATTTTGAAG ATTAATCTGA TAATAGATTG AAAATGAAT	10680
TGAAAAACAG ATTGCTTTCT AAAAAATAGG CAAAAATCTT GTTTTCTCTT CAAGTCGTGA	10740

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TATATAAAA CTATAAAACG TTTTCAAGGA AGGTAAACGAT ATGTCTGAAG AAACAATGCA	10800
TTATGGACAA GTGACAGGAA TGGTGCATTG GACAGAAAGC TTTGGTTCAG TAGATGGGGC	10860
TGGTATTGCG TTTATTGTCT TTTTGCAGGG CTGTACACATG CGTGGCCAGT ATTGCCACAA	10920
CCCAGACACT TGGGCTATGG AGTCCAATAA GTACAGTGAA CGGACGGTAG ATGATGTCTT	10980
GACAGAGGCC TTGGCTTACC GTGGTTTCTG GGGAAATAAG GGTGGGATTA CAGTCAGTGG	11040
AGGAGAAGCT CTCTGCAGA TTGATTTCCCT GATTGCTCTC TTCAACAAGG CTAAGGAACA	11100
AGGAATCCAC TGTACCTTGG ACACCTGTGC TCTTCTTTTC CGTAATAAAC CACGTTACCT	11160
TGAGAAGTTT GACAAACTCA TGGCTGTGAC TGACTTGGT CTTTGGGATA TCAAGGAAAT	11220
CAACGAAGAA CAGCACAGA TTGTCACTAG CCAAAACAAT AAAAAATATCT TGGCTTGTGC	11280
CCAGTATCTA TCAGATATTG GAAAACCTGT CTGGATTGCG CACGTGCTAG TTCCAGGATT	11340
GACAGACAGA GATGATGACT TGAATTGAAC TGTAAAGTTC GTCAAGACCC TCAAAAATGT	11400
TGATAAGTTT GAAATTCCTAC CTTATCACAC CATGGGTGAG TTCAAGTGGC GTGAACCTGG	11460
AATTCATAT TCCCTCGAAG GAGTCAAACC ACCAACAGCA GATCGCGTCA AGAACGCTAA	11520
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AAGCCTGATG GAAACATCGG GCTTTTGACT TGCAAAAAGA CTTAGCAAAAT CAGCTAAGCC	11640
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AACGATATAG TTGACGATAA ACTGTTGGAG AATCATCATG AAACCAACGA CAACCCAGTA	11880
ANGTGTGACA CTAGCTGGTG AGAAGAGGGA GAAGACGACG ATCATGAGTG GGCTCATGTA	11940
AATCATTTC TTGATTTGTT CTCTTTGCAT TTCATCTTCT ACTCCGTGAA GTGAAAGGAG	12000
CGATTGAAGA TAGTAAGGA CACCAGCACA GGCACCAA ATCATACTTG GAGAACCTAG	12060
AGGAATGCTT AGGTAGCTTG CTGAGCAAC CCCTTCAGTA TGTGGGCGC CAAGTAGAT	12120
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GATACCGTGC TCTTTTGAG CAGCAAGAG AGCTGTGTGG GCYTGGAGTT TTTCTTCTTG	12240
AGTAGTCCT TCTTTGAGC GCGTTTGGT TGGCTCAAG ACOTGCTTGA GGGCGTTCAT	12300
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GGGTACGATA ATGGTTACGA TAATGATAGC GACACCAAG CCTAGACCTT TATCAGTAGC	12420
GAAGTACTTG ATGGCTTCAG CCAATAGCGC TCCGATCGTA TTCCAAATAA ATCCGTTCG	12480

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CTGACCTGTG GTTTTATCGA CATPGACACA GCCAGTCAAG ACAAGCAACA TAGCCACTCC	12540
CATAGCCGAG AGTGCAAAAT CGGGGT	12566

(2) INFORMATION FOR SEQ ID NO: 150:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5238 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

TGACACTCTG TAGGATTGTC GTTAATTGAT TGCTCGTACT CTCTACAATA ACCACCAAG	60
TAAAAACGAC ATAGAAAGAT AGCATCAGCT GTAGCCATAG CGCCTTTGAC ACCTTCTGGA	120
TGATTATGAG TTACTCTGCG AGAAAGACTC GTAAGTCCCTC TAGATGATGG CCATATACCA	180
GTTTTCGCAT AAAAACCA CA GTCCATGATC CAAGCACATG GAGAAATACG CATAGCTGAT	240
CCATTCCCAA AGCTATTATA AGGCTCACGG TTATCGCTGT TTAGCCATGC ATTAAACCGA	300
GCACCGTAAT CAGCATTCGG ATACATTCCTG CCATATTTC TCATCGCGTC AATGAAGTCA	360
TCCTTTTGTC CACCATTCAT AATTGCTTCT GCAACAGCAC AGGTCATAAC CGTGPCATCT	420
GTAATAAAGC AGTCCTTCCG AATAAAGGA AAGTCCTTGT TTTTGATATT GTTCCATTCTG	480
TAAACAGAAC CGACAATATC TCCAATAATT GCTCCAAGCA TCAGATTCTT CCTTGTTTAT	540
TTTGATGCTT TTTATATTGG TTATCTACCA TATTATTATT AGAAATAAC ATCCTGTTGG	600
ATTTTTAAAA TTTCATTTTT TTCAAAAATAG GGTTTTACCA TTTCTTTCCA CCTAGCTCTA	660
TGAAAAATGA TTGATTTTAA AGGAGATAGG CCATAATTTC CCAATGCATA ACCATCATTT	720
ACTTCAACAA CAAGTGTTCT GCCATCGCGA GTAACACCGA TATCTAGTCC ATAAGCTATT	780
GGCGCATCTT TCCAACATGA TATCGCTTCA TCAATTACAC TTGCATCAAA TTGTGCATGA	840
TATTCACCTG TATAGGCTCG AACATCTAAT ACGCGACCAT CTAACACAAA ACAACGCCAT	900
TCAGCTATGA ATTCTACAAC CTCATAATC CATATAGGAT AGTCGAAAGG TAGACCAATA	960
CCTATTAAAT CATGGGTTCC ATTAACAACCT CTTCAGTAA AGACTTTTGA ACCAGCTTTA	1020
GGCTTAATCA ATTCTCCCCA ATTATCAGT ATATTACAAA TCTCTCCTAA AATACCAGTA	1080
TAATCTTTC GACCATAAAA CTCTTTAAGC TCAATAGGAT AGTCATGAAC CGGAACGTTT	1140
AAGCCCATCA TTTTATAGTA TGCTCTAGTC TCCATTATAT AATCTACAAC TATATCTTCA	1200
CTTGTTAACT CTTTTATTTC AGAAAAAGAT TGATATAAAA TAACCTTCTTC TCCTTGTAAG	1260
TAGGCACCTA CTTGAGCATT GTATTATATA ATTGAAACCT CACTTGGTAA TTACTTTTGT	1320

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CTAATATAAA CAACCAATTC ATCACTCCTA TATCACTAGT GTTACACCAA TTGTAAAAA	1380
ATAATAGCAA TTTTGTCTCTT ATTTTCTTGA GTAAATAGCC CCCATAATAT CATCGAAATA	1440
ATCAACGGTA TTTAGGAGTA ATTCAATAAC CTGGGACTTT GTTAGTCGCA TTCCCTTCT	1500
ATCTCTAGCA TCTTCTACTA AATTTTCAAG TTTCTCTAGA TTTTATCAT CCAAGCTAAT	1560
CATTATCTTA TTTTATCGG TTGCCATTTT CATCACCTCA AGTTAATCTT ATCAGGGTG	1620
TAACACTAGT GTCAACTGGC TTTTATAATA CATTAGTTTA AAAGTGGAGA GGATTTTAA	1680
CACAGTAAC TTAATCTTTT GGTATTAAAA AATTTTCACA ATATTATATG AAATAAAAT	1740
TGTCTCAAA CAGTTATCAA ATCTAGTATA AATTATGAGC GGCTACTCTA ATACTTTCCC	1800
TCTAAACAAG AAAAAGACTT ACACCTCAAG GTTTTCTTCC CCCCCTTCGT TATAACOTTT	1860
TGACTCTTTT ACTAGCAAG GTATATACTC ACAAGGAAC TTGGTTGACT ATTGAATCTC	1920
TCCACTTCT TCTTTAACAT ATCTTCTAC ATCTTCAATC TCTACAAACA TTGGGTCTAA	1980
GTGACACAAG AATGCCAAA CTTCGATCCC TTTTCTTCTG TAAAGAATCG CTTCACCGTC	2040
TTCACTTCCG AAAAAGCTTC TGTCGATTC ATATCCCGCG CTTCCTAAGA AGTCTTTTGC	2100
TTTACGATAG TTCTGTTCTC TTGTTTCGAC ATAGCGTTTA ACTTCATGGT TGTAAACGAC	2160
ATATGCAATCA ATTTTGAAT ATCCTTCGAT CACTCTATCA TTTTGTAGGG ATAAATTGTA	2220
AATCTCTTC CAAATAATGT TTACATTTTC CTCAGGATCG AACATAAAT TAGATAAAG	2280
AACAATATTT CCGTAAAAA TAATTTCAT ATAAATCGGT ATGTTTTTAG GATTAATAA	2340
CTCCACTTCA AAACCATCTT CTGTTCCAG AGGTATCCC GGGATTTGAG CTACAAAGGC	2400
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TTCCAAATA ACCATCGATA ATCTCTCCAT TTTCAATATC AGGCTAATGT AAATAAGCAC	2520
GTCACTGAC CAATTCAGGC TCTCTGTATC ATCTCATCAT ATTTCTTACT TACTTTACGA	2580
GTCTTATACC CAGAACACAC CTATGCGACC TTGGGTCTCA CCTCTGCGCA TTGGCTGAAC	2640
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TAAACTTACA CATTCACAT GTTCATCAT GTCCAAACCT ATGTTGAGAT TTTCTTCTAT	2820
AATTTGATAG TTAAGAATA TGGATTTTAG CCATTGTCCG TTAGATTTGT TTTCTCTATA	2880
AACTTGAATT TCAGAAATCA AAGCTGAAAT TAACCTGCTA CGCTCTACAT CATTCATGAC	2940
TTTATAGAGC TTATCAAAAT AGATCAGAAC CTATATATAG TTATCTCTGT TAAGCTTTTC	3000
AGCTTCAATA GTCTGTTCTT TTGCTTTCGC ATCAATTAGT GATGATTCTA ATTCATCTAG	3060

1008		
TTTGTTCATAC ATACGATATA GTCTATCATC TAAATCTGTG TTTCTTCTCT TATAATGCTT	3120	
ATCTTCAACA TCTAAATAT CTATTTCCTC AATTAGCTTA AACTTTGTAG AATGACTCTT	3180	
TCTCAATTCC TTTTGGTAAT TATCTATTTT TTTTCTTAT CTAGAGGTAT CCACCTTCAT	3240	
GTTGATTTTT TCTTGCATCA TAGAAGCAAA TTTCGGATTA CTTACTATCT TGACAAATCAC	3300	
CTCTGCAACA GCATCATCTA ACAATTCCTC TCTAATTTGC TTAAGTAATG TACACTTATT	3360	
ACCTCTTATC ATCTGCCTAT GGTACAAAC ATAGTAATAA AANTCTTTAT ACTTTGTGCC	3420	
ATCTTCTCTT TCTTGTATAC ACTTGTTCCT AAACATTCCC ACTCCACATA TCGGGCATTT	3480	
TACAATTCCA GAAAGCAAG GTGTGCTGT ATCTTTTCTT TTAATTCACAT GCTCATATTT	3540	
CTTTGTCTGA GATTTTAGCT TAACCTGAGC AGCTTGCCAA ACTTCATCGG AAACATATAGC	3600	
TTCATGTATC CCTTCAGATA TTAGATATTC ATCTTGTTCA ACCTGCTTAT ATTCAITTTCT	3660	
TGTACCATGA ACTTTTTCTA AAGTCTTCT TCACAAATGT ATTTTCCCAT TATATACAGG	3720	
ATCTTTTAAT ATCTTTCTTA TAAGACCTGC ATCAAAACAA GGATCTTTAC CATTCGTGCT	3780	
TGGGATTTTT CTAAATCCAT GATTCCTCTAA GTATTTAGAT ATCCCATTTG CTCCTATCGT	3840	
AGTATTIACA TACTGGTGA AAATCGTTCT TATTGCAACT GCCTCTTCTT CATTTATATA	3900	
CAGCTTGCCG TCTTCAAGTT TATATCCATA CGAGCAAG CCACCATTTCC ATTTTCTTTC	3960	
CCCTGCTTTT TGAATGCAAC CTTCCATTGT TTGAATACTG ATGTTTTTCT TTTCTATTTT	4020	
AGCCACAGCT GATAAAACAG AAATCATTAG TTTCCAGCA TCTTTAGATG AATCAATGCC	4080	
ATCTTCAACG CAGATAAGAT TAACTCCATA ATCTGCAATT ATATGAAGTG TAGAAAGAAC	4140	
ATCAGCGGCA TTTCTTGCAA ATCTTGATAA CTTAAACACA AGAACAAAAG ATACTCCATC	4200	
TTTTCCAGAT TTTATATCTT CCATCATTCG ATTGAACGT ATTTCTACCTT CAATAGACTT	4260	
GTCAAGACTTC CCGGCATCTT CATACTCTCC AACAAATTCA TAATCGTTGT AAATAGCAAA	4320	
AGCTTTTCATT CGTGATTTTT GTGCCCTTAA CGAATACCCC TCTATCTGTA TTGACCTAGA	4380	
TACTCTGTGA TAGAGGTATA CTTTTATTTT TTTCTTTGAC ATAGTATATA CCTCAATATA	4440	
ATTTTTCTAT ATCATATATA ATTTTTTTAA TTTAAGTTTG GACTATCATT TCAAGTATAT	4500	
TATAACACTT TTATTAGTCC GTCTCAATTT GTGTTTTTGC CATGTCAAAA CTATTTTTCA	4560	
TCTCTTGATT TTTTGTGGC GTTGGATCGG GTAGATTATC TAAATCTAAA GCACAGCAT	4620	
ATTTTGCATT CAGATTTGCT ATTAATACAG CCAATCCATT CCACTCATTT TCCAATATAT	4680	
ACCTCTCTTA AAGTTTATA TCTAATAATT ATTTGTTTAA TTAAGTTTTT TGACATTGAC	4740	
AAGTGCTTTG GATTAGCAAC ATAGGAATCT CACTTCGGCC TCTATTTCCGG ATGAGCCGGC	4800	
TTCAACCTTA GAAGATCAT TACCCTCAT TTTTCATAG CGATAGGGT ATCCCTTCCCT	4860	

1009

ATATTCAAAC TCTTACTTAT CGTCACTTT CTTTTGCTT AGCAGAACTT TTTTGCCTGA	4920
ATTATTTCAGC CGAAGAATCT TGACGGATAG GTTATTACGC TCCAAAAATA ATTAACGTCT	4980
TGCTCTGGTC TATTCAATTG TTAAGGTTCA AAATTTATCG AGAGTTATTA ATCTTTTAA	5040
AAATTGACCA TCAGAAAAATA TTTATCTTGA TGTAACAAAA TTCTATAAAT TACCTCTTA	5100
TACTTAACAG TGAAGAAGAG TCTTTCTGGS TAACCAATTT TGAATAGAA TTTGCTTATA	5160
TAAAAAGGTC CAATTCCCAAC TGCATAAATA GCAGTGAAAA TTAGACCCTC TTGGTAACCTG	5220
TCATCTAAAA GTCTTCTA	5238

(2) INFORMATION FOR SEQ ID NO: 151:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 13425 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

GACGATTTC GAAGAATGA ACAAGAACT GCTCCTATCA ATTCCCAACC TCTATCTCTA	60
AAATCTTGCA GTTCATGCTT ATACTTTTTT AAGAAATCTA GAATCATAGA TACGGTAGAT	120
GACATCGTCT GGTTCACATT GGTCAAAATA GAACAAACCA AAACGACTCG TTCTATAACCT	180
CCAACTTTTC AAATGCATCT CATGTAAATG TTCTTCTTCC TTGTCCAAAT CAACAATGGT	240
GAAATCCGA AATTCTACTC TGCTATTTCAT TGTCTTACCC CAAAAATGAA AAACATGCCCT	300
GCGGTATTTT ATTAGATAAT TCTTTCCACT TTGACTCAA TCTCCAAAAA ATATAAGAAA	360
TCTGAATCGC AAAAATATC AATAAAACCC AATCTATTAT GAAATCAAAA AACACTTTCC	420
AACTGAAAGA ACTACCTCCA GTGACAAACT TTGAGAAAAA CGGTAGTAGA GCTAAAAAGA	480
GAAATAAAA AGGAAGCATC CGCATTTGTTA AAATCCGTTT GGCATAAAAA AATCTTTATT	540
TAAACGAAAA TATTATGCGA AAATTTACGC CAGTTTTTGA ACGGCTGATG TAGATATTTT	600
ATACTTTCAA AATGTTTAAA TGTGATTATT TATTTTGA AAATAGATCA CCAGCCCGAC	660
TGAAGTGCT TATAGAAATG TAATAAGTCG CCTGCCGAAA ACAGCGAAAA ATAGCGGTGT	720
TATGCGGAGA TAATCTGACG CGATGCGAAA GTATATTGCA TACTTATTTT CAACAATTTA	780
GCAGAGTATT TTTATAAGTG TGATATAATA GAAGTATAAT TTGTCTGAT AGTTTATTTT	840
ATGGAGAAGT AGATTTTTTG ANTGCGGAGG GTTCAATATG GTTGAGTTTA TAAAGTCTAA	900
GAAAGAAATG AGTGAGGAGG ATATTAAAGC AAATTCATC ACTCTCGCTA TTGTATCCAA	960



	1010	
AGGATGGAAA AATGGTGAGC ATATCGCTTA CGAAGAAATAC TTCACGTGATG GTCGAATTGA	1020	
AGTTAGAGGA GATAAGGCTC GTCGTAAGA AGGAAAAAA TCAGACTATT CACTOTATTA	1080	
CCAATTTGGA ACTCGAATTG CAATTGTTGA GCGAAAGGAT AATAAACACA GCGTTCGACC	1140	
AGGATTACAA CAAGCTATFG AATATGAGA GATTTAGAT GTTCCATTGG TTGATCTTTC	1200	
GAATGGGAT GCGTTTATG AACACGACCG TATCAGCAGA GAAGAAGGTG AGCGATGAT	1260	
AGACGAATTC CCTACTCGTG AAGAATTATTT TTCTCGTATG ACGAAGGAAA AAGGATTTAC	1320	
GTACGAAATT ACAGAAGCTA TCTCAACTCC ATACTATACA GACGCTTCT CAATGAAAAAC	1380	
CCACCGCTAT TATCAGCAAA TAGCTATCAA CCGTACTATT GAAACAGTTG CCAGAGGACA	1440	
AAAACGAGTA ATGTTTGTGA TGGCAACAGG AACGGGAAA ACGTTCATGG CTTTTCAAAAT	1500	
TATTCATCGC CTTCGAAAAG CTGGTTTGGC TAAACGAGTT TTATTCTTAG CAGATAGAAA	1560	
CATCTTAGTA GACCAACGA TGGCTGAAGA CTTTAGGCCA TTCGAAAAGG TAATGACGAA	1620	
AATTACACCA AAACCTTTGA CTGCTCTCGA AAAATTAAAT TCTTTTGAAA TTTATCTAGG	1680	
GCTTTATCAG CAACTAACTG GTGAAGATGG AACTGAAACA CATATACAAA AATTTGACAA	1740	
AGACTCTTTT GATTTAATCG TAAITGATGA AGCGCACCGT GGTTCAGCTA AGGAAAACAG	1800	
TAACTGGCGT AAGGTAATTG APTATTTCAG TTCTGCGACA CAGATTGGGA TGACCGCTAC	1860	
TCTTAAAGAA ACCAAGAAATG CTCCAATAC GGAATACTTT GGTGAGCCAA TCTATACTTA	1920	
TAGTTTAAAA CAGGGAATCG AGGATGGTTT TTTGGCTCCA TATCGTGTTA TGAGGGTTAA	1980	
TTTAGATGTG GATGTGATG GPTATCGTCC AGAAACGGA AAAGTGGATG CTAACGGACA	2040	
ATTAATAGAA GATAGGTACT ACGGACGAA AGATTTTGAT AAAACCATFG TCAITGATGA	2100	
TAGAACGCAA AGAGTTGCCA AGTTTGTTTC TGATTATATG AAGCAAAACA ATCCACGATT	2160	
TGATAAAACA ATTGTTTTTT GTGTTGATAT TGACCATGCC GAGCGAATGC GTGCTGCACT	2220	
TGTAAAGAG AATCTAGACT TAGTCCAAGA AGACTATCGT TATGTCATGC AAGTAACTGG	2280	
TGACAACGCT GAAGGAAAG CTCAACTGGA TAACTTTATG GATGTCAATT CTAAATTTTC	2340	
CGCTATTGTA ACAAGCTCTA AATTATTAAAC GACAGAGTTT AATGCTAAAA CATGTCGTTT	2400	
GATTGTTTFA GACTCTAATA TCCAATCCAT GACTGAATTT AAACAAATTA TTGTCGTTG	2460	
CACAGTCTT TATCCTCAAA AGGGGAAAGA ATTTTTTACG ATTATTGATT TTGCAAAATG	2520	
TACCAATTG TTTGCTGACC CTGATTTTGA TGGTGATCCA GTGAAGGTGC TAGAAACAGG	2580	
TCCGAAACAA GTCACTGGTT CTACGCCCGG TTTCGTAGAT GAGGAAGGTG ACCCAGTAGA	2640	
AAAATATATC GTTACAGACA AGCAGGTTAC CATCTTAAAT TCTACTGTTT AAGTATTGGA	2700	
TGAAAACGGG AAACGTGATTA CCGAAAGCCT GACCGACTAC ACTCGAAAGA ATATCTTAGG	2760	

1011

TAGCTACGCC	ACTTTGAACG	ATTTTATCAC	AGTTTGGCAT	ACGGCAGATA	AGAAGAAGCT	2820
TATCTTAGAC	GAACTTTATA	AAAAGGAGT	TTATCTAGAT	GCTATTGAG	AGTCOGAGGG	2880
AATATCAGAA	CAAGAAATCG	ATGATTTTGA	TTTACTCCTA	AAACTTGCCCT	ATGGTCAAAA	2940
AGAATTAAAC	AAACCGAAC	GTATCAATAA	ACTCAACAA	AGCGGATATT	TATATAAATA	3000
TACTGAGGAA	GCGCGTGCTG	TTTTGGAAT	TTTACTGAAC	AATFACATGG	ATAAAGGTAT	3060
TGGAGAACTC	GAAAGCATTG	AAACATTAAA	ACTTCCAGAA	TTTCAGATAT	ATGGTGGAAC	3120
CTTCAAAATC	ATCAATACTT	ATTTTGGAGA	TAAAAAACGA	TATTTACAAG	CAATTAAGA	3180
ATTGGAGCAA	GAGCTATTTA	CAGTAGCTTA	ATGAAAGGAA	AGTATGTCAA	TTACATCATT	3240
TGTAAAAAGA	ATTCAAGATA	TCACTCGAAA	CGATCTGGT	GTTAATGGTG	ATGCTCAACG	3300
TATTAGACAA	ATGCTCTGGT	TATTTATCTT	AAAAATTTAT	GATAGCCGTG	AAATGGTTTG	3360
GGAATTAGAA	GAAGACGAGT	ATGAGTCAAT	TATCCACAG	GAATTAATA	GGCGAAATTG	3420
GGCTCATGCT	CAAAATGGGG	AACGGGTATT	GACAGGOGAT	GAATTACTTG	ATTTTGTCAA	3480
TAAACAAGTA	TTCAAAGAGT	TGAAAGAGCT	TGAAATTAAT	TCAAATATGC	CTATTGAAAA	3540
AACGATTGTT	AAATCAGCTT	TTGAAGATGC	GAACAACTAT	ATGAAAAATG	GCCTCTGTT	3600
ACGCCAGATC	ATCAATGTTA	TTGATGAAGT	TGATTTCAAT	AGCCCTGAAG	ATCGTCATTC	3660
GTTTAAATGAT	ATTTACGAAA	AAATCTTAA	AGATATTCAA	AATGCTGGGA	ACTCAGGAGA	3720
ATTTTATACG	CCACGTGCAG	CGACTGATTT	TATTCGGAA	GTTCTTGACC	CAAAACTTGG	3780
AGAATCAATG	GCAGACCTTG	CTTGCGAAC	AGGAGGCTTC	TTGACTTCGA	CTCTGAACCG	3840
TTTAAGTAGT	CAACGTAAAA	CTAGTGAAGA	TACCAAAAAA	TATTAATACAG	CTGTTTTTGG	3900
TATTGAAAAG	AAAGCATTTT	CTCATCTTTT	AGCAGTTACA	AATCTGTTTC	TTACGGAAT	3960
TGATGACCTT	AAAATGTTTC	ATGGAAATAC	TTGGAGAAA	AATGTTCTGT	AATATACGGA	4020
TGATGAAAAA	TTTGACATTA	TTATGATGAA	TCCACCTTTT	GGAGGGTCAG	AATTAGAAAC	4080
AATAAAAAAT	AATTTTCCAG	CAGAATTACG	GAGTCTGAA	ACAGCTGATT	TATTTATGGC	4140
TGTCATTATG	TATGTTTGA	AAGAAAATGG	TGCTGTTGGA	GTTTATTTAC	CTGATGGTTT	4200
TCATATTGGT	GAAGGTGTAA	AACTCGCTT	GAACAAAAA	CTGGTAGATG	AGTTCAACTT	4260
GCATACGATT	ATTAGGTTGC	CTCATAGTGT	CTTTGACCG	TATACAGGAA	TCCATACGAA	4320
CATTCTTTTC	TTTGATAAAA	CAAAAGAAA	AGAAAGAACT	TGGTTTATC	GTTTATGATAT	4380
GCCAGATGGT	TATAAAAAAT	TCTCGAAAC	TAAGCGGATG	AAGTCAGAAC	ACTTCAATCC	4440
TGTTCTGTAC	TGGTGGAAA	ATCGTGAAGA	GATTCGTGAA	GGTAAGTTCT	ACAAATCTAA	4500

1012

ATCATTTTACA CCTAGTGAAT TGGCTGAGTT GAATTATAAT TTAGACCAGT GTGACTTTCC	4560
AAAAGAGGAA GAGGAATCT TAAATCCCTT TGAGTTGATC CAGAAATATC AAGCGGAAAG	4620
AGCAACCTTA AATCATAAGA TTGATAATGT ATTAGCTGAT ATTTTCAGAT TGTGGGAGGA	4680
CAAAATAATGA CACCAAGAACA ACTTAAAGCA AGTATTCTCC AAGAGCGAT GGAAGGGAAA	4740
TTAGTGCCTGC AAAATGCCAA TGACGAACTT GCAGTGAAT TATTAAAGAG AATTAAAGCT	4800
GAAAAAGAAA AACTTATCAG TGAAGGAAAA ATCAAACGAG ATAAAAAGGA AACTGAGATA	4860
TTTCGTGGTG ATGATGGGAA ACAATTATGG AAGTTGCTG ATGGAAGCAC TCAAGAAATT	4920
GATGTCCTT ATGATATTCC TGATACTGG GAGTGGGTGA GGTTCCTAC ATTGGTTGAA	4980
ATTGTCAGAG GTGCTCTCC ACGACCAATC AAGGATTATC TTAATCTGA AGTAGATGGA	5040
ATAAATTGGA TAAAAATAGG TGATACTGAA AAGGGTGAAA AGTATATAAA TAATGTTAAA	5100
GAAAAATCA AAAAATCAGG GCTTAACAAA ACTAGATTTG TAAAAAAGG TACATTTTGG	5160
TTAACTAATT CTATGAGTTT TGGTAGACCT TATATTTTGA ATGTTGATGG TGCAATACAC	5220
GATGGATGTT TGGCTATTTC GAACATGAA AACTCATTA ATAAAGATTA CTTATTCTAT	5280
ATTCTTTTAT CAATGTAGT TTATCTCAA TTCTATCTC TAATTAGTGG AGCTGTGTGT	5340
AAAAACTTGA ATAGTGATAA AGTTGCTTCT ATTCTTATCC CTCCTCCCC ACTATCGAA	5400
CAACAACGAA TAGTAGAAGC AATCGAATCA GCTTTAGAAA AAGTAGATGA ATATGCTGAA	5460
AGTTATAATA GACTAGAACA GCTAGATAAA GAATTTCCAG ATAACTATAA AAAATCTATT	5520
CTTCAATATG CTATGCAAGG AAAATPAGTT GAACAAGACC CAAATGATGA ATCAGTCGAA	5580
GTTTTACTTG AAAAAATACG AGCAGAAAAA CAAAACTCT TTGAAGAAGG CAAGATTAAA	5640
AAGAAAGATT TGGACATTTC TATGTTTTC CAAGGAGATG ATAACTCTTA TTATGGGAAT	5700
ATACCTATGA ATTGGGTTGT TATAAAAAATA AAAGATATTT TTTCATATAA TACAGGTCTT	5760
TCTTACAAGA AGGGCGATT AAGCAATTAAT AATAAAGGTG TTAGAAATAT ACUTGGTGGT	5820
AATATTAAAG CTTTAGAATT TTCTCTGTG GATAATGATT ACTACATTGA TACACAATTC	5880
ATCTCCTCTG AGCAAGTTTA TTTAAACAT AATCAGCTAA TAACACCTGT ATCAACCTCT	5940
TTAGAACAAT TTGAAGGTT TGCAAGAATC GATAAGACT ATGATGGTGT TGTGGCTGGT	6000
GGATTATTCT TCCAATTAAC ACCATTGGA AGTTCAGAGA TTATTTCAAA ATTTCTATTA	6060
TTTAACCTGT CCTCTCGTT ATTTTATATA CAATTGAAAG CAATACTAA ACTATCAGGT	6120
CAGCTTTAT ATAAATTTCC TAAJAATACA CTGAGCGAGC TATTAAATCC GTTAGCTCCT	6180
TTTGAGCAAC AGGAATTAT TACTCAAAA GTTGAGAAAC TTTTGTAAAA AGTAAATCAA	6240
CTTGAATAAT GATTCTTTTC ATCTCTCAT GATTAGAAAT AGGGATTAAAT AATTCCGAGA	6300

1013

TACTGGTACT ATTTAATGTT TTCCCTTTGA TAGCATCTTT TGAATCACCT AAAGTAGAGA	6360
TAAGTGCCAA AATATACATT AAGTAATCTC TGATAATATT TTCTTTATTA GCATAGGGGA	6420
ATATCGATAT AATGGCTTCA TTATGAGTGG CAGGAATATC CAATATGGCA ACTTTTCCAA	6480
TAGATAAATT AAAACTCATT AATAAAGTTC CTTTAGGTGA AATGTCTATT TTCTTTCATT	6540
TTAATGCTAA TTAGAAATA GATTCTCTCG CATTAGTTAC ATAACAGAT ATAGGCATAT	6600
CTGATATAGA TACCAAGGT ATTTCACTTC CCCAAAAAGT AGCTTCACTG CGTGGAGGAG	6660
TTTTTCCAT TCTGAAATTA ACTAGGCTAG CAATTTTAAAT ATATCTCCAT GCTTCTGGGA	6720
TTTCATATAT AGGA'AAGAG GTTGTTCGT CTTTGTTCCT ATAATAAGAG CCATAATCAC	6780
AAAAATAGCA GTAGTTCAGT TTGACCACT GTTATTTTTT ACCAATTAC AATTTTATCT	6840
ACATATTTTT GTTGTTCAGT AGCTGTTTTT CTTAGATAAA TTCGAGTAGT TTCTATACTT	6900
TCGTGTCCCA TCAATCTGC AAGCAAGGCA ATATCATTAAT ACTTCGCTAA AAAATCTTA	6960
GCAATATAAT GCCTAAAGA ATGAGGGTAA ATTACGTTAG GATTCATTTT GTATTTATCA	7020
GCATAATTTT TTAAGTGTG AGCAACTCCT CTTGCTGTAA TTGGTTCGTT AATTTTATTC	7080
AAAAATAAAT AACCACTTCG GCGATTTTCT GATTCATAAC AACTAAGACA ACTATTTCTT	7140
AATTTTTTTAG GAATGTACAG TCTACGAATT TTACCACCTT TTGAGTAAT GTCAAAATAA	7200
CCGATTTCTA CATGCTCTAC TTTTAGTTTA ATAAAGTTAC TTACACGAGC CCCAGTTGCA	7260
CCTAAAAACC AAACGACAAA ATGCCATTTT AAAATACCAT CTTTTTTCAA ACTACGTTTA	7320
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ACAAATTTTA ATTTCAAATC ATCATGACCA ATAAAAACCA GATATTTAAT TACTCCTTGT	7440
AGTCGCAAAAT TGACAGTTTT AGGT'TAAAA TTGTCTAATA AATATCCTTT GTATTCAAAT	7500
AAATCTTCCA TTTTGAGTTC GTAATTCCTC AAAAAAATC GAACACCTAA AAGGTACGAA	7560
CGCACAGTAT TTTTACGCTAA ACCAGCTTTC TTCAAATGTA ATTCAAAAATC TTTCAACGTA	7620
AAATCCTAT CTTATGTTTG ATAGAAATTC CACCGCAGT AAAACTATTA TACTAAATTA	7680
GTGCGTCAAT ATGGGCGAAA AATGTTTGA TTTTATCAAC GATTCGGAT TGTTCAGGAA	7740
GGGGTGGGAG GGGGATTAAT TATCTTTTA TAGTTTTCTG TAATAATCTT TTTGT'TTTG	7800
TACTACCCGA CGCTTTTCT TCAATAACTG ACTGAACAT AGGAGAGGAA AGAAAAATAT	7860
AGATGAATG GCAATTAATA ACCCCCGATA AGACTCTTAT AACTGTAACA TGCGTATCTG	7920
CAACAGCCCA GCCATAAGGA TTTTATTTT CATGGTAAAT AGCTAATCGT CCTAACGTAC	7980
CTAGACCTGT TGAATTCAC ATTAATCAC CATCTCTTAG TAATCTTTCT TTCTGGTAAC	8040

1014						
TATGAACCTG	TTCCGGATCA	ATAAACTCTG	CTAAGTCAAT	AGAAAAGCCA	GACCAATTGAT	8100
TACATTCTCT	AGCAATCACA	GGGTATATAG	GAATATTTGA	ATAATTTTGA	GACTTCCCTC	8160
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CTTCTCTTTT	AATCTTGCTT	TCTTCAAAGA	GTCTTTGTTT	TTCTGCTGCT	ATTTTCTCAA	8340
GTAAAACCTC	GACTGATTTCA	TCAATTTGGT	CTTGTTCAAC	TAAITTTTCT	TGCATAGCAT	8400
ATTGAAGAA	AGATTTTTTT	AGTTTATCTG	GAAATCTCTT	ATCTAGCTGT	TCTAGTCTAT	8460
TATAACTTTT	AGCATATTCA	TCTACTTTTT	CTAAGCTGTA	TTGCAATTGCT	TCTACTATTTC	8520
GTCTGTGTTT	GGATAGTGG	GGGAGAGCAA	TTAATAATAG	TTTAAATAA	TAAATCAATGA	8580
TTGCAGGATA	ACTTGTCTCA	GTAGATTTAT	TATTAACACG	ATTGATAAAA	TTATCTGATA	8640
ATAAATAATA	TTTCAAAATAT	GTTCCTGTAA	GTAAGATATC	CAAAAACATA	AATGCTGTAC	8700
TAGCTATCAA	ATACTCTTTA	AGTTCTCTAA	CTACAGCAAT	ATTTTTTAGA	TATGGCTTAA	8760
CTGTTGAAAA	TAAAGACATA	TTCTGCGAAA	CTAATTTTCT	AGCAGCGGAA	GGCGCTGTGT	8820
CAGGTGAAAG	ATATTTGTAGA	TTTTTGTAGT	TGATTATGTT	CTTTTTTCTA	TCAATACTAG	8880
ACGTATCTAT	ATACCTAAG	GATTTCTCTG	GCTTATTTTG	CCCAAAATTC	CAATAAATTG	8940
ATTTTATCCT	CACCCACTCC	CAAGTATCAG	GAATATCATA	AGGAACATCA	ATTTCTTAG	9000
TGCTTCCATC	AGCAAACTTC	CCATTAATGT	TCTTATGTGC	TTCAAGTATA	TAAAAAGGG	9060
TAAAAATAG	CCATAGATA	ATGGGCTTGA	AAATAGCTTTA	TTGTTAGTGA	GATTGTAGAT	9120
AATTCAAAT	TTTACTTCCA	ATCGAATAAT	CAAACTCTCC	ACCTTTTCTG	CCTGTAATTG	9180
TTCTATCATA	AATTCAATAT	CTTCAGGATT	TTCCCTTTGG	CAACCTCGGC	AGAAATATTC	9240
TTCCGCTCGA	TCAGGATTCA	AAAATCGACA	AGCACAACAA	AAACAGTGC	CATCATCAAT	9300
TATTCAGATA	ATATAGTAGA	TTGAAATAAG	ATGTAAACAA	ATCGATTAGG	AAAGTTAAAT	9360
TAGTTTCTAG	AAATTTTTAG	CAGATGTAGT	GTACTATTCT	AGTCTCAAT	TACTATGGCT	9420
TCAAATATAT	CTTTGAAAA	AATATTTTACA	GATCTGTAA	TTTGAAGCTT	GCAAAAGTTA	9480
GTAATCTGT	AGATTTTCAT	TTGAAGTAAC	TGTTTCTCT	GCCCGATATT	GTTTTTGAAA	9540
TTGAATTTTT	CCATAGTGAC	TCTTTAATTT	TCTTCTAGAC	GTCTGATGAT	AAATCTAATT	9600
CCCAAAAGAG	TCAAGAGGAT	TTTTTGAAAA	ATAAATAGCG	ACCGAAATCG	CTATTTTAAG	9660
GGTTATAGGT	ATTGATGGC	TTAGACTGCT	GTGTGACTGT	TTACCCATCG	GCAATCTTTC	9720
TTCTATATTA	GTATTAGTAA	AGGTCTAAT	AATTATCAAT	TTCCCATTTG	GAAACGAAGG	9780
TTGCATTAAT	TGCCCATTCG	ATTCGTTTGG	CTTCAAGGAA	GCTAGTATAG	ATGTGATCTC	9840

1015

CGAGAGCAGC	TTTAACCACT	TCATCTCTG	TCAAAGCTTT	CAAAGCGTTG	TGAAGAGTTG	9900
ATGGAAGGTC	TGTAATACCA	GCTTCCTTGC	GCTCTTCTGC	TGTCATGATG	TAGATATTTT	9960
CTTCGATAGG	AGCTGGTGCT	TCGATTTTAT	TTTCAATACC	ATACAAACCA	ACTTCCAAAA	10020
GAACAGCCAT	AGCAACGTAA	GGGTTCCGCA	TTGGATCCAC	TGAACGCAAC	TCAAGACGAG	10080
TTCCCATACC	ACGTGAGCA	GGTACGCGCA	CAAGTGGCGA	ACGGTTACGA	CCAGCCCAAG	10140
CAATGTAAAC	AGGCGCTTCA	TAACTGGAA	CCAAACGTTT	GTATGAGTTA	ACTGTTGGGT	10200
TCATGATGGC	AGTATAGTTG	TAAGCATGCT	TGATCAAACC	GCCTAGGAAA	TGGTAAGCTG	10260
TTTCTGACAA	CTGCATTCCCT	TTTGGATCAT	TTGGATCAAA	GAAGGCGTTA	TTTCTTCTG	10320
CATCAAAACA	GGACATAATA	CAGTGCAATC	CTGATCCAGC	AATACCAAAAT	TTTGGCTTCG	10380
CCATAAATGT	TGCGTAAAGT	CCGTGTTTGC	GAGCAATGGT	TTTAACAACA	AGCTTAAAGA	10440
TTTGAATCTT	ATCACAAACA	CGGAGAATCT	CATCGTACTT	AAAGTCAATC	TCATGCTGTC	10500
CAACCGCAAC	CTCGTGGTGA	CTCGCTTCTA	CTTCAAAATC	CATTTTGGTC	AAGACATTCA	10560
CAATCTCAGC	ACGTGTGTTG	TCCGCAAGGT	CAGTAGGTGC	CAAGTCAAAAG	TAGCCACCCCT	10620
TGTCAATCAC	TTCAAGTGGT	GGGTCCCCAT	TTTCAATCAA	CTTAAATAGG	AAGAATCTGT	10680
GCTCTGGACC	AAGGTTGAAG	GATTGGAATC	CAACTTCCTC	CATGTGACGA	AGAGCTCGTT	10740
TCAAATATCC	ACGAGGGTCA	CCCGCAAATG	GTTCACTTTC	TGTTGTATAG	ACATCACAGA	10800
TCAGACCTGC	AACACTTCCA	TTTTCATCTC	CCCAAGGGAA	GACTGTCCAT	GTATCCAAAT	10860
CCGGGTACAA	GTACATATCC	GACTCATTTGA	TACGTACAAA	ACCTTCAATA	GAAGATCCAT	10920
CAAAACATAAC	CTTGTTCGAC	AAGACCTTAT	CTAAGTGTTC	ATCTGTAGCA	GGAATTTTCA	10980
CGTTTTTCAT	GGTTCCCAAA	ATATCTGAGA	ACATAAGACG	AATAAAGGTA	ACATTTTTTT	11040
CCTTGACTTC	ACGCAAGATA	TCTGCAGCTG	TGATTGGCAT	AAGTTTCTTC	CTTAATCTAT	11100
GACTACTTGC	GTTTCCCTAA	CCGGACCAAA	AAGGTGACTG	TACTGAAGCA	AAACGCCCTT	11160
GTGAGGAGG	TTCAITGTGA	AGTGCACGAC	GTACTTCAAT	CTGACTAACC	GCTTTCTTGG	11220
ATTTCGCTTC	ACGTTACGCA	TATTTTTTCT	TAATGGCAGC	GATATATATA	CTTTCAGAGA	11280
TATAATCTTT	GATTTCAAGC	AGACGATCCA	TGTCATTCAA	GGAATACATG	CGAGATTTTC	11340
CTTCGTTTGC	ATCGGGCTTG	ATCAACTCTT	GATCTTCATA	ATAACGAATC	TGACGCGCGC	11400
ATAGATCGGT	CAACTTCATA	ACACTGCCGA	TAGGAAAAAC	AGCCATATTT	CGCGAAATTT	11460
CTTTTTCCTT	CATTTACAAT	TTCTCTCTTT	CTGCTTATTA	TAGTCTAAAA	AAAGACAAAC	11520
GTCAATTGAT	AATGTTATAA	AATGTAACAT	TATTTTCTTT	TTTCTCTCAA	AAAGAGACGA	11580

1016

ATACGATCAA TATCGTAATT TACGATAATT GCGACAAAAA CTCCCATAAA CGTTTCTAAT	11640
ACACGCACAA ACACGTACAA AATTGTCTCA CCACCTGGAA TTGATAGGGT AATGATTAAAC	11700
ATAGCTGCTA CACCACCAAT AACCCCTGCT TTGTTATTCA TGGCTACATT TGTCATAATG	11760
GTTAACATGG TGCAGATTGG AACRACTACC AAGGTCACCC AAAAGGCTTC GTGGA AAAAG	11820
GTATTTAATA AGAAGAAGAC CAAGGCATAG AGTCCACCGA TACTATTTCG TAGAATACGC	11880
GAAGTCCCAA AATGAACACT CTCATCAAAA CTCCTCCCTCA GGCTMAAAAC GCGTGTCAAA	11940
GCACCAATTT GAAGACCTTT CCAGCCAAAA AAGCCAAAAA TCAGAGAAC TAGAAAAACA	12000
GCAATACCTG TTTTAAAGGT TCGCATACCA AGTTTGAACT GGGATTATC GAATTTATAT	12060
TTTTTAAAT AACTCATAAT CTCAACTTTC TATTTCGATT TTATCATAAA TCGGTGATTT	12120
TTATGAGTAA TAGTTGAGAG GAAGCGTTTT TATTTTAAAG AAAAGAAAAG AGGAACCTTC	12180
ATCCCTCTCT TCTTTGATTT ATTTATAAAA TCTTATTTTT CTGTCAAGGC TGCAAGTCCT	12240
GAAGAAGACT TACCTTCAAG AAGTTCATT GATGCTCCAC CACCCGTACT AATCCATGCT	12300
AACCTGTCTG CACGCCAAG GTTAATCGCT GCGCAGCTG AGTCACCACC ACCGATGATT	12360
GATTTAACTC CTGGTTGTTT CACGATAGCG TCCATCACAC CGATGTATCC AGCTTGGAAA	12420
TCTGGGTTTT CAAATACACC CATAGTCCG TTCCATACGA CTGTTTGGC ACCAGTCAA	12480
GCTTCGTCAA ATTTGGCGAT AGATTTTGA CGATGTCAA GACCAAGGAA GCGTTCAGAA	12540
ACTGCTTCAC CTTCAGTGTC ACGCACTTCA GTGTAACGAG CAAATGCGTT AGCTTCTTTT	12600
GAGTCAACTG GCAAGATCAA TTTACCATTT GCTTTTCAA GAAGAGCTTT CGCAACATCC	12660
AATTTGTCTT CTTCTACAAG TGAGTTACCG AATTGATAC CTTGTGCTTT GTAGAAATGTC	12720
TAAGTCATCC CACCACCGAT AAGACGTTA TCAGCTTTTT CAAGCAAGTT TTCGATAACA	12780
CCGATCTTGT CTGAAACTTT TGAACACCA AGGATAGCCA CGAATGACG TTCTGGAGTT	12840
TCAACTGCTT CTTCGATGTA GGCAATTTCG TTTTCAAGAA GGAACACAGC AACTGCTTTT	12900
TCAACGTTTG CTGAGATACC AACGTTAGAT GCGTGTGCAC GGTGAGCTGT ACCGAATGCA	12960
TGCTTTACGA AGATACCATC TCCAAGTGAT GCCAGTATT TACCAAGTTC AGGATCGTTT	13020
TTAGATCTTT TCTTGCCGTC AACATCTTCG TAACGAGTGT TTTCAACCAA GAGAATCTGT	13080
CCATCTTCAA GAGCGTTGAT TGCGCGTCTT AATTCAACAC CACGAGTGC ACCTGGGAAA	13140
ACAACATCTT GACCAAGTTT TGCTGCCAAG TCAGCTGCTA CAGGAGCAAG TGATTTACCA	13200
GCTTTATCAG CTTCTTCTTT CACACGTCCA AGGTGAGAGA AAAGAATTGC ACGTCAACCT	13260
TGTTTCATGA TGTACTTAAT AGTTGGAAGA GCTGCTGTGA TACGCTTATC GTTAGTGATT	13320
ACGCCATCTT TCAATGGTAC GTTGAAGTCA ACACGAACGA GGACTTTTTT ACCTTCAAG	13380

1017

TCAACGCTCT TAACAGTAAG TTTTGCCATG TTACAAAAAC TCCGG

13425

## (2) INFORMATION FOR SEQ ID NO: 152:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 905 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

GATTTATCCT ACCGGnGAAT TTCCGGAGGG GTTCTAGCAG CAATCTTAGG AATCTATGAA 60  
 CGAATGATTG GCTTTCTGGC CCATCCCTTT AAAGACTTTA AAGAAAATGT TTGTACTTTT 120  
 ATCCAGTTG CCATCGGTAT GCTTCTGGGA ATCGGCTTAT TTTCTACCC GATTGAATAC 180  
 CTGCTTGAAA ATTATCAGGT TTTTGTATTA TGGAGCTTTG CGGGAGCTAT TATCGGTACA 240  
 GTTCTTAGCC TCCTCAAAGA ATCAACTCGA GAATCTGACC GAGACAAGAT TGATTTAGCT 300  
 TGGTTATGGA CAACCTTTAT CATTCTGGA TTAGGACTCT ATGCCTTAAA TTTTGTCTGT 360  
 GGAACCTTAA GCGCCAGCTT TCTTAACTTC GTCTAGCAG GCGCACTATT GGCCTTGGC 420  
 GTCTTGGTTC CTGGCCTCAG CCAATCAAAT TTACTTTTGA TTTTGGGACT CTATGCTCCT 480  
 ATGTGTACTG GTTTTAAAC TTTTGATTTC TTGGGAACCT TCTTTCGAT TGGAAATTGT 540  
 GCAGGTGCAA CTCTCATCGT TTTTCAAAA TTGATAGATT ATGCCTTAAA CAACTACCAC 600  
 TCACGGCTCT ATCATTTCAT CATCGSTATC GTCCATCAA GPACCCCTTTT GATCTTAATT 660  
 CCAAATGCAG GAAACGCTGA AAGTATCCAA TACACAGGAC TTTCACCTGT CGSTTATGTC 720  
 ATCATCGCCT TCTTCTTTGC GCTGGGAATC TGGCTTGTA TTTGGATGAG TCAATTGGAG 780  
 GATAAATATA AATAATGGCA AAAAAAGTTA AAATCAAAA AACATTGGTG GAACAAATCC 840  
 TATCTAAAGC AGCTATCCCT CATCAGGGGA TTCAAATCAA TGCCCTAGAA GGAGAGCTTC 900  
 CCAA

## (2) INFORMATION FOR SEQ ID NO: 153:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4278 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:



		1018	
CTTGAATTAA ATAAAAAAGC TCATGCGACT AAGCATTITA CTGATAAGCT TGTGATCCC	60		
AAAGATGTGC GTACGGCTAT CGAAATTGCA ACCTTAGCGC CAAGCGCCCA CAACAGCCAG	120		
CCTTGGAAAT TTGTGGTGGT ACGTGAGAAA AATGCTGAAC TCGCAAAGTT AGCTTATGGT	180		
TCCAATTTTG AACAGGTATC ATCAGCGCCT GTAACCATPG CTTTGTTTAC AGATACGGAC	240		
TTAGCCAAAC GTGCTGTGTA GATTGCCCGT GTTGTGGTGT CTAATAACTT TTCTGAAGAG	300		
CAACTTCAAT ATTTTATGAA AAATCTGCCA GCTGAGTTTG CCGTTACAG TGAGCAACAA	360		
GTGAGCGACT ACCTAGCTCT CAATCGAGOT TTGGTTGCCA TGAACCTGGT TCTTGCATTG	420		
ACAGACCAAG GAATTGGTTC TAACTATTAT CTGTGTTTGT ACAAATCAAA AGTTAATGAA	480		
GTTTTGGAAA TCGAAGACCG TTTCGCCCA GAACCTTTGA TCACAGTGGG TTATACAGAC	540		
GAAAAATTGG AACCAAGCTA CCGCTTGCCA GTAGATGAAA TCATCGAGAA AAGATAGAAA	600		
GAAGAAAAJA TGACAGCAAT TGATTTTACA GCAGAGTAG AAAAAAGCAA AGAAGACCTC	660		
TTGGCTGACT TGTTTAGCCT TTTGGAAATC AATTCAGAAC GTGATGACAG CAAGGTGAT	720		
GCCCAGCATC CATTGGGCC TGTCCAGTA AAAGCCTGG AGAAATTCCT TGAATTCGCA	780		
GACCGCGATG GCTACCCAAC TAAGATGTT GATAACTATG CAGGACATTT TGAGTTTGGT	840		
GATGAGAAAG AAGTTCTCGG AATCTTTGCC CATATGGATG TGGTGCCTGC TGGTAGCGGT	900		
TGGGACACAG ACCCTTACAC ACCAACTATC AAAGATGATC GCTTTTATGC GCGCGGGGT	960		
TGGAGGATA AGGCTCTCAT AACAGCTTGT TACTATGGTT TGAATAATCAT CAAAGAAATTG	1020		
GGTCTTCCAA CTCTTAAGAA AGTTCCCTTC ATCGTTGGAA CAGACGAAGA ATCAGGCTGG	1080		
GCAGACATGG ACTACTACTT TGAGCACGTA GGACTTGCCA AACAGATTT CGFTTCTCA	1140		
CCAGATGCTG AATTTCCAAT CATCAATGGT GAAAAAGGAA ATATCACGGA ATACCTCCAC	1200		
TTTGCAGGAG AAAATACAGG TGTTGCCCGT CTTACAGCTT TTACAGGTGG TTTACGTGAA	1260		
AATATGGTAC CAGAATCAGC AACAGCAGTC GTTTCAGGTG ACTTGGCTGA CTTGCAAGCT	1320		
AACTAGATG CTTTGTTCG AGAACACAAA CTTAGAGGAG AACTCCAAGA AGAAGCTGCG	1380		
AAATACAAGG TGACGATCAT TGGTAAATCA GCGGACGGTG CTATGCTGCG TTCAGGTGTC	1440		
AATGGGCGAA CTTACTTTCG CCTCTTCCTC AGCCAGTTTG GCTTTGCTGG TCCAGCCAAA	1500		
GACTACCTTG ACATCGCAGG TAAATTTCTC TTGAACGATC ATGAGGTGA AATCTTAAAG	1560		
ATTGCTCATG TGGATGAAAA GATGGGTGCT CTTTCTATGA ATGCCGGCGT CTTCACATTC	1620		
GATGAACAAA GTGCTGATAA TACCATTGCC CTCAACATCC GCTATCCAAA AGGAACAAGT	1680		
CCAGAACAAA TCAAGTCAAT CTTGAAAC TTGCCAGTTG TTCTGTGTAG CTTGTCTGAA	1740		
CAGGTGACA CGGCTCACTA TGTGCCAATG GAAGATCCAC TTGTGCAAAC CTGTGTGAAT	1800		

1019

ATCTATGAAA AACAACTGG CTTAAAGGT CATGAACAAG TCATCGGTGG TGGAACTTTT	1860
GGTGGCTTGC TAGAACGGG AGTTGCCTAC GGTGCTATGT TCCAGAGTTC GATTGATACC	1920
ATGCACCAAG CCAATGAATT TATCGCCTTG GATGATCTTT TCCGAGCAGC AGCAATTAT	1980
CCGAGAGCTA TTACGAAATT GATCAATAA AACGATAGAA GTCTGAGATC TTATGCTTGG	2040
ACTCTTTTTT GGAGGGAAG TAGATGTCTC AAATCGAAG AATCAACAG GCTATCATGG	2100
CGGATTGCGA GAATGCCAGC TATACAGAGC GTGGCATTGA GCCTCTCTTT GCAGCGCCAA	2160
AAATGCTCG CATCAATATC ATCGGTGAGG CTCGGGACT TAAAACTCAA GAAGCAGGCC	2220
TTTACTGGAA AGATAAAGT GGTGACCGCT TCCGGGACTG GCTAGGTGTG GATGAAGATA	2280
CCTTTTACAA TTCAGGTAT TTTGCTGTTT TGCCTATGGA TTCTACTTT CCAGGACATG	2340
GCAAGTCGGG TGATCTTCCG CCTCGTACAG GTTTTGCAGA AAAATGGCAT CCGCAGGTCT	2400
TACAGGAATT GCCTGATATT CAGTTAACC TCTTGATTGG GCAATATGCC CAAGCCTACT	2460
ATTTACAGGA GAAATCAGT GGGAGGTAA CGGAGAGGGT GAAACACTAT AAGACTATC	2520
TGCGACGCTA TTTTCCGCTA GTTCACCAT CACCACGAAA TCAATCTGG ATGCCAAAA	2580
ATCCTTGGTT TGAGGCAGAA GTAGTGCCAG ATTTGAAAAA AAGAATTAAA ACCATTTTAT	2640
AGTCAATGAA AATCAAGAG CAACTAGGA AGCTAGTGT AGGCTGCTCA AAGTACAGCT	2700
TTGAAGTTGC AGATAAAAT GACGAAGTCG GTAACATACG CACGGTAAGG CGACGCTGAC	2760
GTGGTTTGAA GAGATTTTGC AAGAGTATTA GAAGAAAAAG AATGAAAGAA ATAGCCTTTG	2820
ACGCATTTTA CCAGCTTTAC CAAAACGACC AGCTTTCTTT AGTGGATGTG AGAGAAGTGG	2880
ATGAGTTTGC AGCTCTTCAT TTAGAAGGTG CCCACAACCT ACCGCTTAGT CAATTGGCTG	2940
ATAGTTATGA TTAATTOGAC AAGATCGCT TGCATTATAT TATTGCAAA TCTGGAATGA	3000
GATCGGCGCG TCTTGCCAA TTCTATTAG AACAGGTTA TAATGTTATC AATGTCAGG	3060
GTGGCATGTT AGCCTTTGAA GAACTTTAAA ATTTTGCAAT TCTCTACTT GGTGTGGAAT	3120
GGTAGGAGA GTTTTATTTT TAGATAATC TTATTTTAA GAAATTTGAA AACATTTAAT	3180
ATTTGCTCG TGATGCTTTT TTCAGACTCC TAATCGTGGT ATACTAGGTC AGTATTTTAT	3240
AAATATGAAG GAGATTTTAA TGCTAAAAA AGGTACCCTA ACAGGTTTGC TCCTGTTTGG	3300
AATATTTTTT GGTGCGGGGA ACTTGATTTT TCCGCCTTCT CTAGGTGCTC TATCTGGAGA	3360
ACATTTTCTT CCTGCCATCG CAGGTTTTGT CTTTTCAGGC GTTGGTATCG CCGCTTGAC	3420
CCTTATTATT GGAACGCTAA ATCCTAAGG ATATATCTAC GAGATTTCAA CGAAGATAGC	3480
GCCTTGGTT GCGACTCTTT ACCTCTCAGT TCTTTACTTG TCAATCGGTC CATTCCTTGC	3540

1620

TACCCACAGT ACTGCTACAA CAGCTTACGA AGTAGGGATT AGCCXCTT TGTCGGATGC	3600
AAATAAAGGA CTGGCTTGA TTGTATTTAC GGTTCGTAT TTTCGGCAG CCTATTGTAT	3660
TTGGCTTAA CCATCAAAA TCTTAGACCG CATTTGACGT ATTTTACGC CAGTCTTTGC	3720
AAATTGTATT GTATCTTGG TCCTCTGGG AGCTATCAAA TATGGTGGAA CAAGTCCTCA	3780
AGCTGCTTCA CTGCTTATCA AGCTTCTGCC TTTGTACAG GTTTCCTAGA AGGTACAAT	3840
ACCTTGGACG CCCTTGCCTC AGTGGCCTTT AGCTAATCG CAGTTCAAA CTTGAAACAA	3900
CTTGGATTIT CAAGTAAGAA AGAATACATT TCAACTATT GGGTTGTGG TATCGTTGT	3960
GCCTTGCCT TCAGCGCTCT TTACATCGGT TTAGGTTTTT TGGAAATCA TTCCCGTA	4020
CCAGCTGAAG CGATGAAGG TGAACACCA GGTGTTTACA TCTGTACAA AGCCACTCAA	4080
GAAATCTTGG GCTCAACAGC TCAACTCTTC CTTCAGCTA TGGTTACCGT AACCTGCTTC	4140
ACAACGACTG TTGGTTTGTAT TGTGTCAACA GCTGAGTTCT TTAATGACGG CTTCACCACA	4200
ATCAGCTACA AGGTTTATCG GACAGCCTT ACCTTGATTG GATTTCATAT TGCCAAATTG	4260
GGTCTTGATG CGATTATC	4278

(2) INFORMATION FOR SEQ ID NO: 154:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 1553 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

ACCCGATCAA ATGACAAAAG CTAACTTTGG TGTGCTAGGT ATGGCCGTAA TGGTCTGTAA	60
CCTTGCCTT AATATTGAAT CTCGTGGTTA CACAGTTGCT ATCTACAACC GTAGTAAGAA	120
AAAAACGGAA GATGTGATTG CTGGCCATCC TGAAGAAGAA TTTGTACCAA GCTATGACGT	180
TGAAAGTTT GTAAACTCAA TCGAAAAACC TCGTCGTATC ATGCTGATGG TTCAAGCTGG	240
ACCTGGTACA GATGCTACTA TCCAAGCCCT TCTTCCACAC CTTGACAAGG GTGATATCTT	300
GATTGACGGA GGAATACTT TCTACAAAGA TACCATCCGT CGTAATGAAG AATTGGCAA	360
CTCTGGTATC AACTTTATCG GTACTGGGGT TTCTGGTGGT GAAAAAGGTG CCCTTGAAG	420
TCCTTCTATC ATGCCTGGT GACAAAAAGA AGCCTACGAA TTGGTTGCGG ATGTTCTTGA	480
AGAAATCTCA GCTAAAGCAC CAGAAGATGG CAAACCATGT GTGACTTACA TCGTCTCTGA	540
TGGAGCTGGT CACTATGTGA AAATGGTTCA CAATGTAATT GAGTACGGTG ATATGCAATT	600
GATCCAGAA AGCTATGACT TGAATCAACA CTTCGTAGGC CTTTCTGCGA AAGATATGGC	660

1021

TGAATCTTT ACTGAGTGA ACAAGGGTGA ATTAGACAGC TACTTGATTG AAATCACAGC 720  
 TGATATCTTG AGCGTAAAG ACGATGAAGG CCAAGATGGA CCAATCGTAG ACTACATCCT 780  
 TGATGCTGCA GGTAACAAGG GAACTGGTAA ATGGACTAGC CAATCATCTC TTGACCTTGG 840  
 TGTACCATTG TCACTGATTA CTGAGTCAGT GTTTGCACGC TACATTTCAA CTTACAANGA 900  
 AGAACGTGTA CATGCTAGCA AGGTGCTTCC AAAACAGCT GCCTTCAACT TTGAAGGAGA 960  
 CAAGGCTGAA TTGATTGAAA AGATCCGTCA AGCCCTTTAC TTCTCAAAAA TCATTTCTA 1020  
 CGCACAGGA TTTGCTCAAT TGCCTGTAGC CTCTAAGAA AACAACTGGA ACTTGCCATT 1080  
 TGCAGATATC GCATCTATCT GCGGTGATGG CTGTATCATC CGTTCTCGTT TCTTGCAAAA 1140  
 GATTACAGAT GCTTACAAAC GCGATGCAGA TCTTGCCAAC CTTCTTTTGG ACGAGTACTT 1200  
 CTTGGATGTT ACTGCTAAGT ACCAACAAAG AGTACGTGAT ATCGTAGCTC TTGGGGTTCA 1260  
 AGCAGGTGAG CCAAGTCCAA CTTTCTCAGC AGCTATTAAT TACTTTGATA GCTACCGTTC 1320  
 AGCTGACCTT CCAGCTAACT TGATCCAAGC ACAACGTGAC TACTTTGGTG CTCACACTTA 1380  
 CCAAGCTAAA GACAAAGAAG GAACCTTCCA CTACTCTTGG TATGACGAAA AATAAGTAGG 1440  
 TCAGGCCATGG GGAACCGGAT TTTATTAATT GAGAAAGAAC GAAATCTAGC TCATTTTTTA 1500  
 AGTTTGGAA CCGAGAAAGA GCACTATCGG GTTGATCTGG TAGAGGAGGG GCAAAAAGCC 1560  
 CTCTCCATGG CTCTCAGAC AGACTATGAT TTGATGTTAT TGAACGTAA TCTGGGAGAT 1620  
 ATGATGCTC AGGATTTTGC AGAAAAATTG AGCCGAACCT AACCTGCCTC AGTCATCATG 1680  
 ATTTTAGATC ATTGGAAGA CTGCAAGAA GAGCTGGAAG TTGTTGAGCG TTTTGAGATT 1740  
 TCATACATCT ATAAGCCAGT CCTATCGAA AATCTGGTAG CGGTATTTC GCGATCTTC 1800  
 CGAGGTGGG ACTTCATTGA TCAACACTGC AGTCTGATGA AAGTTCCAAG GACCTACCGC 1860  
 AATCTTAGGA TAGATGTTGA ACATCACAGG GTTATCTGTA GTGAAGAGAT GATTGCTCTG 1920  
 ACACGCCGTG AGTATGACCT TTTGGCGACA CGG 1980

## (2) INFORMATION FOR SEQ ID NO: 155:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 6478 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

CCGGCATAC ACGAGCTTGG GGAACAGCCA CTGGACGAT GAGGTGTGAG CTCMAATAT 60

1022		
CCTCCAGTTA TGTPTTCTCT AATAGTATAC CGGAAGAGTG AAAGGATTTT ATATGGAGC	120	
GGTTCACAAAG AACCTACTTT CTATTAAJACA GTATACTATG AAAATGTGAA AATTTAACAT	180	
TTTTTGTAC AAATTTTATA AATTATTGCC TTTTAAATAT CAATAGTTAA TCTCTATCC	240	
AGATCCCCCT TGTGTAAACT TPATCTTTAT AAGCTTCAAG GCCCTATCC CATCTATTG	300	
CAACAAATTAG ATCACTTTGT TTTGTAAATA GTTCAAAAT CTTTTCAATA ATTACGTTAT	360	
CTATACTAAC GTTTAAATTT GGTTCATATA CTAAAAATTT TATACCGACA ATCAATAGTT	420	
CATTAAITAT ACTTAAATA GCTGACTCTT TGTAAITATC TGAATTAAT TTCAATCCCA	480	
ATTATATATAT TCCTACTATC TTTGGCTTTC GTTCCAATAT TGTTTAACT ATGAACGTG	540	
TTCTATTGT GTTTGAAATA TCAATCGCTT CTATCACTGG GGCATTTAT TCTATAAAT	600	
CTTTTTTTAA TTTGTTAGTA TCTTTGGGA GACAATATCC TCCAATCCA AAAGAAGGAT	660	
TATTAATAAA ATTTCCAAT CTGGATCTA AACAAACACC TTTTATTACA ACTTCAGCAT	720	
TTAAGCTTCT CTCTCAGCA AAGAATCTA GTTCAITAAA AAAGCAACAC GGAGAGCTAA	780	
GAATGTGTA GAAAAAGCT TAATTGCTTC TGCTTCAGTA GGAGAACTA ACATAACATT	840	
TTTAATATTG GCAGTACTAT GAGTACTAAT CGAAAGGAAC AACTCTGCAA TTTTCTTCC	900	
TTCAACTGTC TCACTCCAA CAACTATGCG ACTTGGATAT AAATTATCAT ATATAGAAC	960	
ACCTTCTCTC AAAAAATCAG GGACAAAAAT GATATTTTTT GTATCAACA GCCTTTTTAA	1020	
TTTGTTTGAA AAGCGATCG GAACGTGTA CTTTAAAAAT ATCTTTCCAT TAGGTTTAC	1080	
CCTCAGAAAT TFCGATACCG TTTGTTGAT TCTATATGTA TTAATACTAC CAATTTCTC	1140	
ATCATATCT GTCGGAAGCG CAATAATATA ATAATCAATA TTATTTTTAA TTTCAAAAA	1200	
TGTATCAAAA AAAGTAATAT TTAAGTTAT CTGCAAAAA AACCTCATAA GCTCTCAT	1260	
TTTATAGGA AGAATGCCCT TTTTAAAT ATTTATTTTT ACAGAATCTA TATCATATGC	1320	
AACAACTTAA TATTTAGATG CAAATAGTAA CGCOTAGGCC AGCCCAACAT GCCCAAAAC	1380	
AAITACTGCT ATATTCATAA AACTACTTCC TPAATTTCTA ATCCAAATC TAATAGAA	1440	
AGCTGCCCA TTCTTAAAT ACAACTCTTT AATATTGTTT AAAAGTTTTT CAACTGATT	1500	
CCAGATTATC AAAATCTGAG ATTTATAGCA CAATATGAT GATATCTAT CAATATAAT	1560	
TTTTTCTACA AGTCTCTCTT GATACATTTT TAATCTTTA GTTTTTCCA TATAACTAAC	1620	
CATACTACTA TCACTTACAT ATGGGAAGTC CTCATAATAT ATTACTTTAT AACGCATAAA	1680	
TTCAAGCGCC CTTCCAATAC TATTCACAAA AACATGAGCA ACATGGTCAC CAAGTGAAG	1740	
CGGACAAAT ACAGACATTT TGTGCTTAA ATGCAITAAC AGCTCTTTTA TGATATCAT	1800	
CTTAAATGTG TCCTCAATTT TTAATTCACT ATAGATATGA CGGTATAGAA AATTGCCATT	1860	

1023

TCTATCTTTC CTATAGAGAC ATTCATAGTA CGATAAGTGT CTAAATTCAC ATTKFAGAGG	1920
TTACACAAGCT AACCTGTCTT CTTCTTCCT TTCTTCAATC GGATATTTCC CAAAGTTACA	1980
CAACTTATGA AATTGCTTAG CAGAGGGCTG TAGCTGTTGG CTCAAAGGGT AACCAAGAAA	2040
TATAGTAATA ACAAGTACAA TTCTCTCTTC TGAAGTTAA TTTGAAATAT AATCACCCACA	2100
GGAAAAAAT GCCTCATCTA AATCTGGAGA TAAAAAGTA TACTTAGTAT TGTACTCAT	2160
AACCATTCCTC TCTACAATTT ATCTAAAAAC TCATCAAGTG TCTGATTAAA TTCACATCA	2220
TCAAAAAAT TCACCTTATT CTTAATAATG AATATTTCTG TAAATAAACA TATATATAAA	2280
TATTTCAATA TCCTTTCAT ATCATCTCTT AATTCCTCTT CAATATTTTG TATCAGCCCA	2340
TTTCAATCT TATTAAAAA GATAAGCTCT TTATCTCTAA AATTAAATAT TTTCATACAA	2400
CTGTTGTATC GAAAAATATA TAAATAAATT TTTACTAATG TTTGAATATT TAAACAACATA	2460
AATAAATGAG TTGTACCCGG GACACTATTT ATGTTATCAA GAACACATTC TTGAAACCTC	2520
AACTCACAGT TCCTTTTGTG AAATTCCTTT TTATCGTTTA GATCTGATAT TTTTGTAGAC	2580
AITTCACAAA TCTCAGACAT TTTATATGGA TATCTAGGAT GAATGCCAAA ACTATGCAAA	2640
ATGAACATGCA CCCCAAAAGT TAGACAGAA TAACTTAATC TTTGGGGTGC AGTTTCATAAG	2700
ATTTGGATAT TTTTCTTTAG CTAGAAGTAG TAGAAATATA TAGTCAAAATA ACAGATACCT	2760
TAAGGGTTTC TCATCTACAT AAAAAAATGA TACTTTTTTC TCTFCAGTAA TTACCTCATA	2820
AGCTTCACAA TAGAATCTCA TGTFTCCCTC CCCTATATTC TTAATAAATA TCCTTTGGAA	2880
ATTGATATAT CTTAGTAAAA TATTGTTTAA GTTCCGGATG CGAGCATGG GTAACAATAA	2940
TGACAGTCAA ATCTCTCTCA TCTAATATCT TACGTTCAAT CGCTAACGAA GTTCTCCTAT	3000
CGATAGCAGA AGTTCCTCTG TCAATTAATA CTATTTCTTT ATTTCTAATT AGCCCTCTAG	3060
CTAAAGTAAT TTTTGTGTTT TGCCCTCCTG ACAGTAATCT CCCATCATCA CCAACATAAT	3120
AATCTAAAAA GTTATTAGGA AAATCTTTTA CACTCAAAAC AACTGCTCTT AAAGACTGTA	3180
GTATTTCTTC ATCAGTATAA TTTTCTTCCA AAAAAATATT ATCTCTAATC GTACCTTCAA	3240
ACAAAATAAG TTTTGTGATCT ACATATAGAA CATTCGAAAC CATATTTAAA TAGGAGGTTT	3300
TTTTTATATC ATCCCGCAG AATCGCAATT CTCACATA ATCTCTCAAA AAGCCATTCA	3360
ATAATTTTAA TAATGTAGAT TTCCCGCTTC CACTTTCACG TAAAAATTAA TACTTTTCAT	3420
TACGTGAAAA ACAAAAATTT AAGTTTCTTA ATATTTCTTT ATCTCCATAC TTATAGCAAA	3480
TATTTTTTGC TTCATATAAC GAAAAATCTC TATTCACCTC ATTTGGTTCC ATATCATTTCA	3540
TTTTATTTGA CTCATTTGGA TTAATTTGAAT ACAATTTTAA AAAAAAGGC TTCTGATCCAA	3600

1024

TAATAGAGGA TAAFTGACCT CCTAATTCAC CTAGCGCTGT AAAAATAACA CTGTTAGTG	3650
CTCCTAATTGC TTCATAGTA CCAATTTTCA CTATTCCTTT TATTGCAAGA TAGCCTGTTA	3720
AAAAACGAG AGATATCTGA AAAAAATAT TGAGAAAGAA GCTAATAGCG CTGCTAACG	3780
TTTCTACAGT TGTCTTCTT TGTATAACCA TCTTTAATAA AATTCCTGCT TCTTTAATT	3840
TCTTAGGCAA TACATATAA AGATTCAAG AGCTTAACAC ATCAAAATCCA TTCAAATAG	3900
TCTCACTAGA TTTTAAAAA GCTTCATTTT GGTAGTTAA ATTAGACTA ACTTCTCGCA	3960
TTTTCGATGC AAAGATTTT GGTACAAGTA GCATAATCAT TAATGAAJAC AAGGTGGCTA	4020
CAGTCAATGA CCAATGATAG TGATTAAAG TCACACTGC AATATAGTA CCAGAAATTC	4080
CTTTTATTAC TAAAAAAGT TGTTTAAAG CCTGATCATT TAAAGTCTGA ACATCATAT	4140
TTAGCCACGA AAGATATGTT CCTGATGATT TACTATGAAA TTCTTAGTAG GTAGAGTTAG	4200
AGATGTCGT GGCACCTCTA TTTGCAATCT CTAGATPAAA CTCTTGGATC ACTTCAACCT	4260
GATPAATTTT CACTCCAGC TCAAGGAATA TTATCCCAA CCAGACAATC ATTTGGTAGA	4320
TTGACAATTT CAAAAACGC TCTAAATTC TCGCAATTA TTCAATCAAC ACCAGAGCAT	4380
TAATAGTTGC TGCATAAAT AGCAATAATT GACCAGCAAC AATAAATATC GTTAATAAAC	4440
TAAATTTTT TATATTGAT TTTATAATAG TATACACAAT AGTTTCTCAC TTTCTAATT	4500
TTAATTGAAC ATAGTTTTC TATATACAA AGAAAAACC AAAATGATAT AATAACATAT	4560
ATTTCAAAA AGAAATTCGT TAAAAATTT TTCTTCTCTT GCCTTCTTGA TTACTTTTAA	4620
AGCCTTGAT TTGTCTCCTA TTAATAGTAA CCGCTTTATG TTTAAAGAA ATATTTCTT	4680
TGTAACCAAT ATTCTCTGT TGAAACTCAA TAAATPAAAA TATTCTCTAC AGTAATTATA	4740
ATATTCTTCA TCTGCATTAA TTGTTTTTG TGTCACTCCA GTGATACGT TTTCTTTACT	4800
GTGAGGTGAT TAATTCACCA AGAATTCTCG CACTATATCA ATTTGGTATC CTTGAACAAG	4860
TAGTTTTAAT AAAACAACAC CGTCTGATG TGAATCTATT TTCTCAAAC CATTAATTA	4920
TCTTAGCACC TCTTTTTC ACACCAA AAA TGACGTACCT GCTATATTGT GAACCATTTG	4980
AACAAACAG GGAATTCCAA CAAATCGGT CTCTCTCTCT TCTCGGTAC CATTTGGATA	5040
AATTAATTAT CCATAACTAC AAACAAAGC TAAATTTCTT ATTTCTACTCT TTTTAAJACA	5100
AGCCATCAAC TTTAAAAATC GATCTGCAAT ATATTCTATCA TCATCGTCTA AAAATGATAT	5160
ATACTTACCT CTAGAAATTT TGATACCTAT GTTTCTGGCA TTAGTTGCAC CTAATCTTC	5220
ATTACTTAAA ATTAACCTAA TTCTATGATT GGTATAGCCA AATTGATGGA TAATTTTAT	5280
TCTTAAATTT ACATTACTAT AATTATCATC AATAATTATA ACTTCGATAT TTTTATAACT	5340
TTGATGTAAA CAACTTTTCA CAGCTCTAAT CAGAGATTCA TACCTATAT GTGTGGTAT	5400

1025

TATAATACCTT ACTAATCTCT GATCTATATT CCTATCCATG ACTACTCTTC TCTAATAATT	5460
CATCATATAC TCTCATGGTT TCTACAAACA TTTTTCGCAC AGAAAAATGT TTCTCTATTT	5520
TTGATTTACT ATTCTCACCT ATATATTTCA AATACTCAGA ATCATTTGAGT AAAAAATTAG	5580
CACAAGCACA CACTCCCTCA ACATCTTCCT TCTCAAAATA AAATCCATCA ACCCTATGTT	5640
CAATAATTTT ACTTAACCCG CCAACATTAC TAGCTAAAAC CGGAGTTCTT TGTGACATTG	5700
ACTCTAAAAC ACACATAGGT ATTCCTTCTG TATCAGAAGG AATATACAAT AAATCCGATA	5760
TTTGGTAAC TATAGTAGCT GGATAGATTT CACCAGTAA CCTGAAATTA TCTCTACATT	5820
TCAAATGGCA AATTTTCTCT TTCAAAGCAG CCCACATACT ACCATTTCCA GCCATAATAA	5880
AAATCACATC TTCTCTGACT AAAAATAATT TTCTCTGAAA TTCAAGGAAT CTATCCGGCC	5940
TTTTTCTGG ATCCAACCTT CCAACATAAC AAATGATTTT TTGTTATTTG GAATACAAAA	6000
TTCTTTTATA AAGTCTTGAA CACCTACTAC ATCTAAATCG CTATTTTGATA CATTAAPTCC	6060
GTATTTTATT GCAACTATCT TCTTATTTT TATTATATCT TCCAAATCTT TTTTTCATAG	6120
TTTCAGATAC ACAAATAAAA GCATCTCCCA TAGAATATGT CCAAAAATCA AATTAAGTCA	6180
AGAAATTTCT TTTTAAGTTA TATTCACCC ATCCATGGCA TGTATCACT GTCTTAACCT	6240
TTCCAAATCC ATTCTTGTC AATTTTATTA ACATATATTA AAAATAATTA GTTGAGTAGC	6300
CATGACAGTG TATAAGTTGG ATTTTAAATA ATTTTAAAA ATTTTAAAG GTGAAGGAG	6360
TTTCAAAAT ATTTGAACAT TGAGTACAAT CAACATAGGC AATATCTAAA TTTTATAAT	6420
CATCAATAAC CTTTGAATCT CTAGATACAA TTATCAAAAT AGGGAATAGA GACA	6474

(2) INFORMATION FOR SEQ ID NO: 156:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4792 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

TATTTAAGCA TTTTTTCAT GTCAATTCCT CCAAAATAGA ATACTTATA ATCTTAACG	60
AAAAAAGCA TTACGCCAT TATATGATAT CTATCTCTGT GATAAGTTT TTTTATGGGT	120
AATTTAAAG ACCAAACGA AGATGGCAAT CAAGACCACT CCAAGAGAA CTGTTCCGAC	180
TAGATTCGGG TAGGCAAGG CTACCAAGC TGTGGGAAG ACGGCTAAGA AGTCCAGTCA	240
TTTGATTTGA GGAAGACTGC CAACCTTACC TGTCACTACG CTGAAAGAA TCAGGCGAAA	300



1026

GATAATGGAA ACAGGCAAAA ACTTCAAAA ACGCTCAACA ATCGCAGGCA GGCCCTTATA	360
CTTGACCAG ATGAAGGGAA TCATACGGG AATCCAAGTC ACCAAGCCAG AGAAAAATAC	420
TGCTAATAAA AGATACTTAC TGACCATCTA AAACCACCCC CATGTACAA CCAAGTAGOG	480
TCGCAACAG AACAGCTAGT GACTGAGACA TCACTGTCAA GAGCAAAAAG AAGGACACCG	540
CAACACTGC TAGGATAATG AGCAGATTGC GGACAGGAAT CGCTCTTGC ATAACTGTAA	600
ATTGCGAAGC AAAATACCAA TAAACATCCC AACCAAGGCA AAATCCAAGC CAAAGATTTC	660
TGGATTGGT AGCAGGCCAC CCAGAGCCGT TCCGACTACT GTCCCCACAA ACCAAGCCAC	720
ATAGCTGTTA AGATTGTTC CTGTCATCCA CATAGGATT ACCTTGTCTG TATGGGCCAA	780
TTCAACCATC AAAACGCCAT AGGTCTCATC TGTCAAGATA CTAGACATAC CGATATTGTA	840
CCAAAGACTG GTATGACGGA AATAAGTCGA TGCCTGTAAA CTCACAAAA AGAGACGCCA	900
GTTGATTAGA AAAACCCATC TAGCAATAGC TGCCACAGGA GCTTGAACCA CAATCAGTGC	960
CAACATGACA AACTGGGCAC TCCAGCATA AACAAAGAGA CTCATCAAGC CCATCTCAAC	1020
AGGTGTCACA TAGGGCGCAC CGATAATTCC ACAAGCCAGG CCGATACTGA CATAGCCAG	1080
AGCCGTTGGC ATGGCTGCT GCGCCCGCTC CTAAAACTCT TTTTCTTTCA TCTTTCTCT	1140
CATATTGCTT TAATAATACT CAATGAAAT CAAGAGCAA ACTAGGAAC TAGCCGACGG	1200
TTGCTCAAAA CACTGTTTG AGGTTGCAGA TAGAACTGAT GAAGTCAGCT CAAACACTG	1260
TTTTGAGGTT GTGGATAGAA CTGACGAAGT CAGCTCAAAA CACCGTTTTG AGGTTGTGGA	1320
TAGAACTGAC GAATCAGTA ACCATACCTA CGCANAAGT AAGCTGAGCT GGTTTGAAGA	1380
GAGTTTCGAA GAGTACAAGT AGGCTGAAAA GAATCCAACC ACAGCATGGA CTATTATATA	1440
GCAGATTGAA ATAAGATGAG AACAAATCGA TTGGGAAGT AAAATTAAAT TCTATAAATG	1500
TTTTAGCAAT TGTTTCGTAC TATTTTAGAT TCACTTATT ATAACACATT CAGAAAAGAG	1560
AAAAAGTCT GTTGATTTTG ACCATCATAA AAAGACTGGC AATCCAGTCT CAAACATATA	1620
TTATAGAAAT TCTCCACTAA ATACTTTTAC GAATATTGAG AAGCATACA AAGGCAACTA	1680
GAAGAAATAG CAATAAAAAA AAGCTAACTG CCAGAGTTCC AAAGTAGTA GCAATGGTTA	1740
CCAAGCTAT TGTAAATAAG CTAGGTAAAA CAACCGTAAT GGCACCGATA GAGGATTGAA	1800
CTGCTCCCAT TGACTCCTCA GGTATTGTTT TAAAAACGAG TTCTTGCAAT CTAGGAGAGA	1860
GAACACCTGC GAAAAAGGCA TCCAAGGTAC TAAAGATGAG AATCCAGTCA AAACGAACCTG	1920
TGGCAAAATC TACTAGAAGA AGCAACTGGA TGACAAGTGA GGCATAGAGA GCTGTTTTTA	1980
TGGAATGGT ATGTTGCAGA TAGCCACTTA CAAGGCTTCC GACAAACAGG GCTGATAATT	2040
CTAGTGTGGC TAACAAGGCA AGAGATTGAC CAGTTGTAAA ATTCAAAAAG GGCTGGTTCC	2100

1027

TTAAAAATAG AGTGGAAATA GGAACCGTAA CATTTATCAC TGCTTGACTA GTAGAGATAA	2160
TAAACAAAAA CAAGAGCACC TTATTCATAT TCCATATCAA TTTCGATGAT TGGAGCAAAAT	2220
GCTGGCAAAA GGATTTTACA GAGAGTCCTT CTTGATAGCT AATCGTTTTT TCTACTTTCA	2280
AGAGGTCAGT TTTTATGAAG AGGATACCTA AAAATCCGAT TAAAAAGGTA AGAGCGTTCA	2340
GTAAAGGAAAT AAACCTGGATG GATAGAAATGC CTAGTAAGAC TCCCTCTAGG ATATTACTGA	2400
TTGTTTTCAC TAAACTAACA GTTGACTGTT TAAAGCCAAT AGCTTCTGCC AGATGGTCTT	2460
GCCCAATAAAT TCTAATGAAA ATCGGAGTGA GCATGCCGCC TGAATAATAA CTCATATGAT	2520
CAGACCAAGAG GTTAATCAGA CAAATAAATG CTACTAGCAA CAAGGAGAAA GACTGCCCTG	2580
AAAGTGATAA AGACACTATA GAGTAAGCA AAAATTTTGC AAAACTAATG ACTGTGTATT	2640
TCAAGACACG ATGATGTTGA AAATCCGCCA AAATCCCGAG AAAGATTGTG AGAATTTGGG	2700
GCAGGGTTTC TGAATCTGTG ATGAGTAAAA TCGCAAAAGG GGCARAAGAT GCATCTGCCA	2760
CATAATTCAG GAAGGCCAGA TAAAAAATCG TATCCCCAAG CGTTGAAATC CACTGGTTGA	2820
TAGTTAATTG CCTAAATCT CTATTTTGAA GAAATACTTT CATCACAAC CTCTCTTAAG	2880
TTCAAATGGG AATCTTTCCC CAAGGATAGA CCGGATACT ACTAACAACC AAAATTACAG	2940
TAAACATCAA AGCTGACCAA TGCCATTGTA GACTATATGC AGTCCAATAG GCCAATAAAT	3000
TGACTTTGTC ATTCTAAATA AGACTGCAAA TATAAGACCT CCACCCATAT AGAAGACAAA	3060
GTCTGTCAAG ACCCAACCGT GATTACTAAT GTGCGAGACC CCAATAAAAA CAGCGGAACC	3120
AAGTACATCT AGCCCCCAT TCTTTCTTTT TTCCAGAGCA GTCATCACTA ATCCACGATA	3180
AATCATGTCT TCAAAAATGG GACCTGCAAT CACAGGATAA AAAAAATACA TCAAAAATGC	3240
TGTAGCCCTT GTAAAATCG GAGCAGCATG TTGATAAGAA ATTTCAATTC GAGTAGGTGG	3300
GAAAAGAAAA AAGGTAAAGA AATTCCAAC AACAAAAGCA AGCAGAGCTA GGAAGGAATA	3360
GAAAAGATAG GATCCTTTAA ACTTTCTACT ATTGATTTC TGCCATTTC CCGACCAAAT	3420
CATAGCAATA AGAGCAATA AAACCAAG AGAATTCAAC ATCATATCC ACAGATAATA	3480
GGCAAGATCA GATAGCCAG TAACAAGGTC GCTGCGTAAA ACTAGAACAC TGAATTTCTG	3540
GTCAACATA ACTAGTAGAA AAATAATAAT AAGTAGCGG TGTGAGATTA TCTTTTTCAT	3600
ATATGACCTT TCTAATATCC AATACCAAT AAGATAACAA TAGTAAAGAA ACTATTTCAT	3660
GAAACATGCA GAGCTATAG CCAATAGATG GATCGGGTGT AGCGAAACAT CATACAAAAT	3720
ATCAAGCCCA TTCCAAAATA CTTTATGAAA TCTGTCTGTA TCCAACATA CTGCAAAAACA	3780
TGCAATAGCG CAAATATGGC AGCGGAAACA AGAACATCAA GATAGTATCT CTTAACTTTA	3840

1028

GATAAACTTG TCATCAAAG ACCACGACAA ACAACCTCTT CTGATACAGG TCGATAATA	3900
CTAGTATAAA GTATTGCGGT AACAAAATAG CTAATTCTGT TIAAATTGGT GGCTACTTCT	3960
ACGACTGTAC TTCCATTCTG GGTACGAGGA AAGATATAGG TTGTTAGATT TGCCACACAG	4020
AACAATAAGA AAAAAGAAAG AAGGAAACCA CCCAGGTAAG ACCAACGAAA CTGGAACGA	4080
CCACACTCTT TCCAATGTC ACTTTTGACA AAAGCAATFG TAGCTATAGT TCCCAAGAATA	4140
AGTACCAATA AAACCTGGAA CACATAGTAC ATATTATCAG ACAAGCAAC CATAAAACT	4200
AGTCTCATG TGACATTAAT AATGAGGTAA TAACTCAAAA TCAACAAGCC AGTTGCTAGG	4260
TGAAATTACA CTCTTTTCAT TTCTTTCATC CTATTATCTC CTATAAGAGC CTATCTCTTA	4320
CGGCGGCCAA ACAATCCATC TGCTAAATCT ATAGTCCAAT CAAAAGTCC ACGATTAGGA	4380
CTCATCCCTT GATTGCCCCA ACCAGGGTAA ATTCCTGGGA CCCCCAACC AGATATACCA	4440
CTTCTTCCAC CACCTCCCAT AGAATTTCAG AGGTTGCCCT CTCTAACATC TTGCAACTCA	4500
GCTTCTGTCA APTCCATTGT TCTCGCAAT TGTAAATTGA ACATCTTTTA CACTCCCTCA	4560
ATTATCTTCA TTGTAAACC ACTTCTGCGA CCTAGGATTT GCTTCAAGTG CTTTACAAGT	4620
ACAATATAAC ACGAACATTG GCTTATTTTA GAAAATCGCA TATTTGATAT TTTTCTTAT	4680
AGAAATTACA GATTGCGAT TTGGGTGAAT TTGATTACTT CTCTGGTATA ATAAAGTTAC	4740
TACTAATGAG GAGTGGAGAA ATATGAAGAA ACAAAATTTA ACATTATTGA AA	4792

(2) INFORMATION FOR SEQ ID NO: 157:

- (1) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 2156 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

CCGTTCTCGG CGACGGCCAT CTGATGAAGC TATTTATGAG GGAACTGGC AAGCTGGAGA	60
GTGAGAGTAT CTAGCTTTTC ACCGATTGCT GTGGCAGCAG ATGTGCAAGG AAAAGAGATT	120
GCTCAAACTT TCTTAGAGGG CTGATTGAA GGTTTTGATT ATCTTGATTT TCGCTCAGAT	180
ACGATGCTG AAAACAAGGT TATGCAACAT ATTTTGAAGA AACTTGGTTT TAAACAAGTC	240
GCTAAGATGC CAGTAGATGG CGAAGCTTG GCCTATCAAG AATTAAAGAA ATAAATGCAAA	300
AGAAGTATGT AAAATCCTC TACTCCTCAC CAATTGGTAT TCTATCACTT GTAAGTAGTG	360
ACCATTATTT GTATGGAATT TGGGTTGAG AGCAGAAGCA TTTTGAGAGG GGAAGTAGGAG	420
ATGAACAGAT AGAAGAAGTT GTTAGTCATC CTATTTTAGA CCCAGTATT GCTTGCCTAG	480

1029

ATGATTACTT TAAAGGCAAG CCTCAGGATT TATCCAACTT GCTCTTGGCG CCAATCGGAA 540  
 CGAATTTTGA AAAGAGAGTT TGGGACTATT TACAGGGCAT TCCTTATGCT CAGACAGTGA 600  
 CCTATGGACA AATTGCTCAA GACCTGCAAG TGGCTTCTGC TCAAGCAATT GGTGGAGCAG 660  
 TGGAGACGAA TCCTTGCTCT ATCCTAGTAC CTGTGTCATG TGTGTGAGA GCAGGCAAGC 720  
 GCTCTGACAGG TTATGCTGCA GGAGTGGAAA AGAAGCTTG GCTCTTGAG CATGAAGGAG 780  
 TAGATTTTAA AGATAGAAGC AATAGAAGGA GAAGCACATG TTAGAATTTA TCGAATACCC 840  
 CAAATGTTCA ACTTGTAAA AAGCAAAACA AGAATTAAT CAATTAGGTG TGGACTATAA 900  
 AGCCCTCCAT ATCCTGGAAG AAACACCTAG CCAAGAAGTC ATTTGAATTT GCCTAGAAGC 960  
 CTCAGGATTT GAATTGAAGC AATTTTTCAA CACCAGTGGT ATCAATATCC GTGAATTAGG 1020  
 GCTAAAGAT AAGGTAGGAA GTTTGTCAA CCAGAAAGCG GCTGAGTTGC TAGCAAGTGA 1080  
 CGGTATGTTG TTAAGACGGC CCATTTTAGT AGAAATGGA ACTGTTAAGC AATCGGTPA 1140  
 TCGAAATCTT TATGAGGAAC TGGGACTGAA ATAGTTTTTA TCTATCTCTT TGATAGATAA 1200  
 AATATATAAC TTCCCTGTTT CAAAGTATGA TAAACTAGTA GGTAGACAAA GTCTGTATCT 1260  
 GACCGTAGCA AATAATTTC ATTGACGGCAG AAGCATGGTA GCATGAATCA TTATCAGAAG 1320  
 AGGATGTTTT TATGAATGTT ACAACGATTT TAGCATCAGA TTGCTACCAA AACTTGATGC 1380  
 AATTGATTCC GGATGGCAAG CTGTTTAGCC TACGTTGGGT CTTTGATGGA ATCCCTAGAA 1440  
 TTGTCCAACA ACTTCCAACA ACAATTATGT TGACAATTGG TGGTGCCCTT TTTGGCTTGG 1500  
 TTTTGGCGCT TCITTTTGCC ATTGTGAAGA TCAATCGTGT CAAGATTTTA TATCCCTTGC 1560  
 AGGCCCTCTT TGTTAGTTTC TTAAGAGGGA CACCGATTTT GGTGCAACTC ATGTGACCT 1620  
 ACTACGGAA CTCTTTGGCT TTGAAGGCC TCANTCAGCA ATGGGGAAC GTCTCAATA 1680  
 TCAATCGGAT TCCAGCTGCA GCTTTTGGCA TTGTGCGCTT TGCCTTTAAT GAGGAGCTT 1740  
 ATGCTATGTA AACCATTGCT GCAGCCATTC TCTCAGTTAA TCCTGGTGAG ATTGAGGCGG 1800  
 CACGCACTCT GGGTATGACC CGAGCGCAAG TTTATCGAGC AGTGATTATT CCTAATCGAG 1860  
 CGGTGGTAGC TACTCCAACC TTGATTAAAT CCTCATCGG TTTGACCAAG GGAACATCTC 1920  
 TAGCTTTTAG TCGGGGTGTT GTGGAAGTCT TTGCCCAAGC TCAGATTCTA GGTGGAGCTG 1980  
 ATTATCGCTA TTTTGAACGC TTCATCTCCG TTGCCCTTGT TTATTTGGGA GTCAATATCG 2040  
 GAATTGAAG CCTCGGTCTG TTCATCGAGA GAAAAATGGC TATTCTTGCA CCTGATACAG 2100  
 TGCAACGAT GTCAAGGAG ACCTTCGTTA ATGATTAAAG TTTGCAATTT AAGCAA 2156

(2) INFORMATION FOR SEQ ID NO: 158:

1030

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3140 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

GTATCTCTAC ACATGCTCTC AATCGATTTT GTTGCTCTCC AATTAAATTC CTTATATGCT	60
TTGTCTGCAT TTGCATAACA AGTTGCAACG TCTCTTGAAC GTCTTGGAAC TATTTTATAA	120
GGATATGGGA TCTTATTAAC ACTTTCAAAT GTATTTACAA GTTGTAAATC ACTAGTCCCT	180
TCTCCCAGAC CTAGGTATA GATATAAACA TCTGTTTTT CAGATACTTT TTCTAAAGCT	240
TTTATATGTC CTATTGCTAA ATCTACTACA TGGATATAAT CACGCACACC AGTACCATCA	300
AGCGTATCAT AATCATTTCC GAACACACTT AGCTCTGATA GCTTACCTAC CGCTACTTGT	360
GCATATAAAG GCATCAAGTT GTTAGGAATT CTTGAGGGAT CTTCCCAAT CAAACCAGAC	420
TCATGAGCAC CAATTGGATT GAAATAACGA AGCAACGCAA TACTCCATTC TGAATCTGCC	480
ACATGAACAT CTTTTAAAT TTGCTCAAGC ATCACTTTTCG TATACCCATA AGGATTGTGC	540
GCACCTGTTT GCATGCTCTC AATTAGAGGT GACTGATTGT TAATTCCATA TACAGTCGCA	600
CTTGAAAGAA AGACAATCTT TTTAACAATTA AATTCTGACA TCACTTCAAC AAGTGCCAAT	660
GTACTCATAA TATTATTTTT GTAGTACATC ACAGGCTTTT GCACGGATTC TCCGACAGCT	720
TTATAACCTG CAAATGAAT TGCAGCATCA ATCGATTCTT GTTCAAATAC CTTTCTCAAT	780
GCTTGTTTAT CACAAACATC TAATTCTGTA AACACGGGAC GTATTCTGT AATTGCTTCA	840
ATACGGTCTA GCACCAAGAT GCTAGAGTTC GAAAGTTGT CGACAATGAT AACTTCCTTT	900
CCTAAATTTA GTAATCTAC TACGGTATGG CTACCAATAT AACCACTCC GCCTGTATAC	960
AATATTGCCA TCTGGGTTTC CTCCTAATTA ATTCCAACCG ACTTAACAA TCTCATAAAC	1020
GCTTCATGCC CAGACGGTGT ATCTTATAA ACTCCTGCAT CTTCCAGAAC TCTCGCAAC	1080
ACTTGTCTCTG CTTCTGTGTG AACTACGCTA TTAACCTCTT CTTTATTAAT GCGAGGATAT	1140
TTTTCTTTCA ATTGGTCGGC CCATTCATAA TGATAATCCG CAATTGCATT ATCTCTCTCT	1200
AAAGAGTATT TTCCAACCTC TTCTAACTCT GGTTCACAC GAGGTGGTAA TATCGCAAGT	1260
CCCATCACTT CGATTAAACC GATATTTTCC TTTTAAATAT GTTGATACATC TTGATGAGGA	1320
TGGAAAAAC CATCTGGGTA TTGTTCACTA GTATGATTAT CTCTTAGAAC AATATCTAAT	1380
TCGTATCTCC COTCCACTTT ACGAGCAATA GGAGTCACCG TATGGTGTGG GACATCTTCA	1440
GTCTAGCAAA TGATGCTAC TTCTAAATCT GAATATCTCT TCACTTATT TAGAATTTTA	1500

1031

GTAGCTAAAT CTAACAAGCG ATTTTATTTT TCACCTTGTA ACCTAATAC TGACATGGCC	1560
CATTTTACAA TACCAGCATT AACATCCTCA AAGCTTTTAA AACAAAATC ACTCTCAANT	1620
TTTGCTTTTT CCATTGGGAA AATATGTTTC CTCCTCTGGT AGTGGTTATG ACTAAGAATG	1680
GAGCCTCTCG AGATAGGAAG ATCAGAAATT GAACAGCAA AATATCCTGG CAAAATATCA	1740
ACAATCTCCA ATAAATTCTC AATATGTTTA GAGTAATAG CCATTGGTAC ATGTTGACTA	1800
TTCAAAAATA TCGCATGCTC ATTAAGTAT GAGTAGGGAG AATACTGGAA TCCCCATACT	1860
TGCTACCAA GTTCAACCG AATAATTCTA TGATTCGAAC GTGCTGGATA ATTTATTCGC	1920
CCCTGATATC CTTCATTTC CATACATAGT AAACATTGGG GATAATTAGT TCGTTTACT	1980
AATTTTTCAG CAGCAATTGT TTTTGGATCT TTTTCGGGTT TTGACAAATT TATCGTAATC	2040
TCTAGCTCTC CGTATTTAGT TGATGCTCGA AACTCAATAT TCTTAGCAAT AGCAGAAGTT	2100
TTAATATAAT CACTATCTTT ACTTAACCTA TAAACTCTT CAATGCTCTC TTGAGGTGAT	2160
ATATCATATG AACTCCAAA AATATCATT AATCGACTAG GTAAAGGAAC TATGAAATTC	2220
ATTAACCTCG CTCCTAAACA TTCCTTTTCC TCGATTAAAT CTTTAATTTT ACCGTTTTTT	2280
AAGGCGATTT CCACTAAGTA ATCTTTTATT TGTTTCAGGT CATTTTCATC GGAAATGCCA	2340
TCAATTCCTT CCTCACCTAT TAACGCTAGT ACTTAATTTT TCACATATAT TTTGTCAATT	2400
TCATTATACA TTCCGTATTC AATTACTCTA TCACAAAAT TATCAATAAT TGTTTTCATA	2460
TATTTTCTTT TCTAATTTAT GTTCCCATAT TTCTATATA TTATCCATTT ATAAATTGCT	2520
TGCGTAGTAT GAGCAATTTT ATCAAGGTGA TGAATAATAT CTAAAGCACT AATTACTTCA	2580
GAAACGTTC CATCATCTTC AATATGTAA TTCATTATTT TCTTTTCCAT ATTATACTA	2640
AGCTCTCTA TCTCATCTCG TTTTGTGATA ACAACCATAT CTAAACATCC AGATTGTTCC	2700
TCTCTATAAC AAGATATAGC CCTATTCTA TGCAGTCCGA TAACCTCATG AGTATTTTTT	2760
ATTTTGTAAA TAATTTTCTT CAAAATTCTA TTATTTTGAA GAATCTGAG ATTTTIAAA	2820
ATTTCAACAA TTCTATCCCC AATACGTTCA ATGTCAAGTG ATATTTTAT TACACTAATA	2880
ATTTCTCTTA AGTCATATGA AACAGGATGT TGTAAACAAA TTAACCTATA TCCTTTTTTA	2940
TCAATATTTA GAACGACTC ATTTATGATT AAATCTTCIT TAATCAATTC TACTCGTTCT	3000
TCATTTGATA AATATCTAAA TAACTTCTCA TATTATCAAA GCACAGATAC CCAATGGTC	3060
TCTAATTTAT TTGATAATCT TATAATTCTA TTTTCTAAAT ATAACCTTAA CATTTAGGTA	3120
CCTCTTCTTA ACAAGGTCG	3140

(2) INFORMATION FOR SEQ ID NO: 159:

1032

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 9048 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

CCGGATGATT TCCTGGTCAG ATAGGGGGAA AGTGACTTCC TCAGCAATCG CGCGTAGAGT	60
AGGATTCCCT TCACGGATAA TATCGTTCAT ATCAATTAAAG TGAGCAGCTT TTGTAATACG	120
TTCTATTGCA GACATTTTCT CTCCTTATAT TATGTTTAGT GCAGTTAGCT ACTGCCAAAG	180
CCCAGTGGT ATACTTGGAA TAAGCCACTG TGGATTAGTT CATTTTCTTT CATTACCTCT	240
ACATGATATC ACAAATGAC AAGAATTGAA AGCATTATGG CATTTAGGAT TTATAGAAAA	300
TAGATAGGAA GTTCAATCA ATTGTGAAAG AAATACCTAT CTGTGATATA ATAAAAAGAA	360
AAGGCTTGCA TAAGAAAGTA GGGAGACGA AGATACAAAG AAGACAAAAT CGAAATCAGG	420
GTGGTTTAGC TTTTCGTTTT ATGAAGGGCT TGTAAAACCT TTTAGGAGTT ATCGCAAGTG	480
GAGCAATAAG GGATTGTGG CGATACTCTT GCTAGCAGTT GGTTTATCAA TGGGCTTGGT	540
CTTGTTGTTT GAAAGCTTCC AAGGAATCCC TTGACTAGTC AAAACGAGA TACTATTTCT	600
CAGAGGGGA CTAAGCAAAA GTCTCAGGAG TAGGAAGAGG AAAAACTGC CAGAATTATG	660
GCCCACGGGG ATTTGCTCTA CCACGATGGA CTTTTCCTTT CAGCTAAAAA AGAAGACGGT	720
ACCTATGACT TTCATGAAAA TTTTGAGTAT GTGACTCCTT GGCTCAAGCA AGGGGACTAA	780
GCAGCAGATT TAGCTATTGG TGATTTTGAA GGAACCAFTA ATAAGGATCA TTATTTAGCG	840
GTTATCTTC TCTTAATGC TCCTGTTGAA GTTATGGATG CTATTAAGGA GGCAGGTTAT	900
CATGTGCTGG ATTTAGCTCA TAATCATATT TTGGATTCCG AAATTGAGGG AGTTATTTCA	960
ACGGCCGATA TTATTGAGAA AGCTGGAATC ACTCCAATCG GAGTTTATAC GCACGAACCA	1020
CGTGATCAGG CTCGCTGGT CATTAAAGAA GTGAATGTA TCAAGGTTGC ATTGTTAGCC	1080
TATTCCTATG GTTTCATGG AATTGAGCAG TATATTCTC AGGAAGACTA TAATCGTTAT	1140
CTTTCAGATT TAAACGAAGA TAAGATGAGG GTTGAAATG AACGGGCAGA GAAGGAAGCA	1200
GATATCACCA TTATCATGCT TCAGATGGGT GTTGAGTATC GATTGGAACC AACTGAAGAA	1260
CAAAAAGCTC TTTATCACAA GATGATCGAT TTGGGAGCGG ATATTATCTT TGGAGGCAAT	1320
CCTCACGTTG TTGAACCATC TGAACCGGTT GAAAAAGATG GAGATAAGAA ACTCATTATC	1380
TATTAATAGG GGAACCTCAT TTCCAATCAA CGAATTGAAT CTATGGGAGA TGAAGAGANT	1440
GCTAAGTGGG CTGAACGTGG TGTCTCATG GATGTCACCA TCAAGAAGAA GGATGGAAAA	1500

1033

ACAACTATCG GAACAGCTAA AGCTCATCCT ACTTGGGTCA ATCGAACACC AAAGGGAACC	1560
TTTTACCAG AAGGATATCC CTTGTATCAT TACCAAACTT ATATTTTGGA AGATTTTATA	1620
GAGGATGCA GTCATCTGTA CCAGTTAGAT GAAGCGACTA AGGAACGAAT TGATACAGCC	1680
TATTAAGAAA TGAATGAACA TGTGGGATTG AAGTGGTATT AGCTTGAATC CAGAGGAAG	1740
TAAATGATGA TTAAGGTAAT TCGACAGAT ATGGATGGGA CCTTGCTGGA TGCTAGAGGT	1800
CAGCTTGATC TCCCACGATT GGAAAAGATT TTAGATCAGT TGGATCAAGG GGGCATTGCT	1860
TTTGTCAATTG CGACGGGCAA TGAATTCAC CGCATGAGAC AACTACTGAG TCCCTTGGTG	1920
GATCGAGTGG TCTCTGGTGT TGTAAATGGC GCTGTATTT TTGAAAACAA TGAATTGATT	1980
CAGGCTCAGA CATGGGATGA CGCCATTGTC AACAAAGCCT TGACTCATTT CAAGGCTCGA	2040
GCCTGTGAG ACCAGTTTGT TGTAAACGGG ATGAAGGGTG ATTTTGTCAA GGAAGGTACG	2100
ATTTTACAG ATCTTGAAG TTTTATGACT CCAGAAATGA TTGAAAATTT CTACCAACGG	2160
ATGCAATTTG TGGATGAATT AACATCTGAC CTCTTTGGTG GTGTGCTCAA GATGAGCATG	2220
GTGTGTGGTG AGGAACGTT GAGTTGGT TTGGAAGAAA TCAATGCTCT CTITGATGTC	2280
CGTGTCCGAG CTGTATCCAG TGGCTATGGT TGCATTGATA TCCCTCAAGC TGGGATTCAT	2340
AAAGCATGGG GCTTGGAGGA ATTACTCAAG CGCTGGGACT TGAATCCCA AGAATCATG	2400
GCTTTTGGTG ATAGTGAATA TGAATTTGAA ATGCTTGAAA TGGCTGGAAT TGCTATGCG	2460
ATGGAATAAG CTGATGAGAA AGCCAAAGCT GTGGGACTG CTCTAGCACC AGCCAAACAGC	2520
CAAGGAGGAG TTTATCAAGT CTGGAAAAC TGGTTAGAAA AAGGAGAATG AAGTGGCAGT	2580
ACAGTTATTA GAAAATTGGC TCTTAAAGGA ACAAGAAAAA ATTCAAACTA AGTATCTGTA	2640
CCTAAATCAC ATTTCTGTG TAGAACCAAA CATCTTTTAT TTGGGGATT CCMTGTGTA	2700
GFATTATCCT CTACAGGAGC TATTTGGGAC TTCAAAGACG ATGTCAATC GAGGAATTCG	2760
TGGCTATCAG ACAGGACTGT TACTAGAGAA CCTTGATGCT CATCTATATG GTGGAGCAGT	2820
AGATAAAAT TTTCTCTGA TTGGGACAAA TGATATCGGA AAGGATGTT CTGTGAATGA	2880
GGCTCTCAAT AATCTGGAAG CTATCATTCA ATCCGTTGCT CGCGATTATC CATTGACAGA	2940
GATTAAATG CTTTCCATT TTGCTGTCAA TGAGAGAGAG GAGTACCAGC AGGCAGTCTA	3000
TATCCGCTCG AATGAAAAA TTCAGACTG GAATCAAGCC TATCAAGAC TTGCATCTGC	3060
CTATATGCG GTGGAAATTG TGCCAGTATT TGATTTGTTG ACAGACCAAG CAGGCCAAT	3120
CAAAAAAGAA TATACAACCT ATGGACTGCA CCTCAGTATT GCTGGTTATC AGCCTTTGTC	3180
AAATCTCTG AAGACTATC TTTACTAAAT AGCTAAATAA TGCTAAATTT GAOCATAATA	3240



1034			
TCTTGTAATA	AATTCATAAA	TCCTTTAAAA	TAAAAAGTGA CGGAGGAATT TATGAATGTA 3300
AATCAGATTG	TACGGATTAT	TCCTACTTTA	AAAGCTAATA ATAGAAAAAT AATGAAAA 3360
TTTTATATTG	AAACCCCTTG	AATCAAGGCC	TGTTAGAAG AATCGGCCCT TCTGTCACTA 3420
GCTGACCAAA	CGGGTCTTGA	AAAGCTGGTT	TTAGAAGAAG CTCACAGTAT GCGTACTCGT 3480
AAGGTAGAGG	GAAGAAAAAA	ACTAGCTAGA	TTGATTGTCA AGGTGGAAAA TCCCTTAGAA 3540
ATTGAAGGAA	TCTTATCTAA	AACAGATTGG	ATTCATCGAT TATATAAAGG TCAAAATGGC 3600
TACGCTTTTG	AAATTTCTC	ACCAGAAGAT	GATTTGATTT TGATTCAATG GGAAGATGAC 3660
ATGACAACTG	TAGTAGAAGT	AGGAGAAAAA	CCTGAATTTC AAACAGATTT GGCATCAATT 3720
TCTTTAAGTA	AATTTGAGAT	TTCTATGGAA	TTACATCTCC CAACTGATAT CGAAAGTTTC 3780
TTGGAAATCAT	CTGAAATTGG	GGCATCCCTT	GATTTTATTC CAGCTCAGGG GCAGGATTTG 3840
ACTGTGGACA	ATACGGTTAC	CTGGGACTTA	TCTATGCTCA AGTCTCTGGT CAATGAATTA 3900
GACATGAGCA	GTCTCTGCCA	GAAGTTTGAG	TCTACTGAAT ATTTTATTC TAAGTCTGAA 3960
AAATCTCTCC	TTGGTAAAGA	TAGAAATAAT	GTTGAATTGT GGTTTGAAGA AGTATGAAGT 4020
GGACCAAGAT	TATTAATAAA	ATAGAAGAAC	AAATCGAGGC AGGGATTTAT CCGGAGCCT 4080
CTTTTGGGTA	TTTTAAGGAC	AATCAATGGA	CAGAGTTCTA TTTAGGCCAG AGTGACCCAG 4140
AGCATGGCTT	GCAGACTGAG	GCAGGACTAG	TTTATGAOCT AGCTAGTGTC AGCAAGGTTG 4200
TTGGGGTTGG	CACAGTTTGT	ACCTTCTTGT	GGGAAATAGG TCAATTAGAT ATTGATAGAC 4260
TGCTAATAGA	TTTTTTACCT	GAGAGTGATT	ATCCAGACAT CACTATTGCG CAGCTCTTGA 4320
CTCATGCAAC	AGACCTTGAT	CCTTTTATTC	CTAATCGTGA TCTTTTAAAC GCCCCTGAAT 4380
TAAAGGAAGC	GATGTTTCAT	CTCAACAGAC	GAAGTCAGCC AGCCTTTCTT TATTCGATG 4440
TCCATTTTTT	GCTGTTGGGC	TTTATTTTGG	AAAGAATTTT TAATCAAGAT TTGGATGTGA 4500
TTTTAAAGGA	TCAAGTCTGG	AAACCTTGGG	GAATGACGGA AACTAAGTTT GGGCCAGTTG 4560
AGCTTGCTGT	TCCAACAGTT	AGAGGTGTAG	AGGCAGGCAT AGTGATGAT OCCAAGGCAT 4620
GTCTCTGGG	TAGACATGCT	GGGAGTGCTG	GTTTATTTTC GACTATAAAG GATTTACAAA 4680
TCTTTTGA	ACACTATTTA	GCAGATGATT	TTGCAAGAGA CTTAATCAA AATTTTCTC 4740
CTTTGGATGA	CAAGGAACGT	TCTTTAGCAT	GGAATTTGGA AGGAGATTGG CTAGCCATA 4800
CGGGCTATAC	AGGTACCTTT	ATCATGTGGA	ATCGTCAGAA GCAAGAAGCC ACTATTTTCC 4860
TATCGAATCG	TACCTATGAA	AAGGACGAGA	GAGCTCAATG GATATTAGAC CGCAATCAAG 4920
TGATGAACCT	GATTCGCAA	GAAGAGTAAG	GAGAGACATG TCAAAATGTT TAAAAGGAGC 4980
TTTACTAACA	GTGTGGCTG	GTATTGCTTG	GGGGTTGTCA GGAACAGGTG GCCAATACCT 5040

1035

AATGGCACAC	GGAATTCGG	CTCTGGTCTT	GACTAACTTG	CGTCTTTTAA	TCGCTGGTGG	5100
AAATCTCATG	CTCTTGGCTT	ATGCTACTGC	AAAGGATAAA	ATACTGGTCT	TTTTAAAGGA	5160
TAGAAAGAGT	TTGCTGTCTC	TTCTTATTTT	TGCTCTGATT	GGTCTTTTTC	TCAACCAATT	5220
CGCCTATCTG	TCTGCTATTC	AGGAGACCAA	TGCGGGAACA	CGGACGGTGC	TTCACTATGT	5280
TTCTCTCTGT	GGAATTTTAA	TTTATAGCTG	TATCAAGGAT	AGGGTGGCAC	CGACACTGGG	5340
AGAGATAGTT	TCCATCATAT	TCGCCATCGG	AGGAACCTTC	CTGATCGCAA	CACATGGGCA	5400
CTTGGACCAG	TTATCCATGA	CACCTGCTGG	TCTGTTCTGG	GGTCTCTTTT	CTGCCCTGAC	5460
TTATGCTCTG	TATATCATTT	TACCCATAGC	CTTGATTAAA	AAGTGGGGGA	GCAGCTTGGT	5520
CATTGGTGTG	GGAATGGTCA	TAGCAGGTTT	GGTCGCCCTT	CCTTTTACAG	GGGTTCTACA	5580
GGCGGATATC	CCGACTAGTC	TTGATTTTCT	CCTTGGCTTT	GCAGGCATTA	TCCTTATCGG	5640
GACTGTCTTT	GCTTATACAG	CTTTCCTTAA	AGGAGCCAGT	CTGATAGGAC	CGGTCAAGTC	5700
AAGCTTGTTG	GCTTCAATTG	AGCCAATATC	GGCGATTTTC	TTTGCTTCTT	TAATAATGAA	5760
TGAAACAATT	TATCCCATTG	ATTTTCTTGG	TATGGCAATG	ATATTGTTTG	CTGTAACTTT	5820
GATTTCTTTG	AAAGATTATG	TCTTAGAAAA	ATAAAAAAGA	CTCTTTGTCC	GTGACAGAGA	5880
GTTTTTGGGT	GGAATCTAAA	TTATTTTCAA	GATAAAAATC	AAAGCGTTCC	CCTACATATT	5940
GACTTTTTAC	GTATTCAAAA	GCAGTACCAT	CTTCTAGGTA	GGAAACCTGG	GTCAATCCAA	6000
GAATAGCATG	TCCTTTTTCA	ACTTCCAAAT	AGTGGGCAAT	CTTTTCTTTA	GCAAGGGGAG	6060
CATAGATGGT	CTGTTGAGAT	TTGCCGATAC	GATAGCCATG	TTTTTGCAGG	GTTTGAAGA	6120
AATGACTGGT	GATTTCTTCT	TTTTTAAAGT	CCTTAATGAA	TTTTTCAAGA	ATAGAAGCAA	6180
CTTCATAAAG	TAGGGGAATC	TGCTCGGCAT	AGCGGACCGG	CTCCATTGGG	ATAATATTGT	6240
CCGTTGGAAA	AATTCCTAGC	TTGGCAACTT	CTTGCTCATT	GGGAATGGTT	TTTTTGTGAG	6300
AAATGAGCTG	GCTAGAGGGA	ACTTTACCTT	GGGATTGAGC	AATTTCAATA	AAACTGGTTG	6360
TCCTCGCATC	CTTTCTTGT	ACTCGAGTAC	TGGAACAAA	GGTGCCGCTT	CCTACACGGC	6420
GCTCTAAGAC	GCCTCTCTCG	ACTAATAGAG	ATACGGCTTG	CGGAGGGTTC	ATCGACTGA	6480
CGCAAACTG	CTCAGCTAAA	TCTCTTTTAC	TGGGAAGCCT	CTCACCAATA	GCCCAACGGT	6540
ACTCGTCAAT	ATCCTTTTTT	ATCTGATCAT	GGATTTTAT	ATAGCAGGTT	AGCATATTTT	6600
TCACCTCAAT	TCTATCTTTT	CTCTATGTGA	CCCCAATAAA	CTAGAAAAAG	TCAAACTTCG	6660
CCTTGTTTAG	TTGGTAATTC	GCCCTTATTT	GTGATAGAAAT	ATTGAGAAAA	GATATTTCTT	6720
TTGAGAAAGG	AAAAAGATGA	GCAACATTTT	AACGTGTTTG	CAAGATGTAG	AAAAAATCAT	6780

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CGTATTGGAC	TAIGGTAGCC	AGTACAACCA	GCTGATTTC	CGCGTATCC	GTGAGATTGG	5840
TGTTTTTTCA	GAACATAAAA	GCCATAAAAT	TTCACTGTCT	GAAGTTCGTG	AAGTCAATCC	5900
TGTAGGAATT	ATTTCTATCAG	GTGGTCCAAA	TTCTGTATAT	GAAGATGGTT	CAITTTGATAT	5960
TGACCCAGAA	ATCTTCGAAC	TCCGAATTC	AATTTTGGGA	ATCTGTTATG	GTATGCAGTT	7020
AATTGAACCAT	AAACTTGGAG	GAAAAGTTGT	TCTCGAGGT	GATGCTGGAA	ATCGTGAATA	7080
CGTCAATCA	ACCCATAACT	ACACACCATC	AGCGCTTTT	GAATCAACAC	CTGATGAACA	7140
GACTGTTTTG	ATGAGCCATG	GTGATGCGGT	TACTGAGATT	CCTGCTGACT	TTGTTCTGTAC	7200
AGGTACATCA	GCTGACTGCC	CATACGCAGC	CATCGAAAAC	CCAGATAAAC	ACATTTACCG	7260
TATCCCAATTC	CACCCAGAAG	TTCTGTCATC	TGTATACGGA	AAATGATATCC	TTCTGTAACCT	7320
TGCCCTTAAC	ATTTGTAAAG	CTAAAGGTGA	CTGCTCAATG	GATAAATTC	TTGACATGCA	7380
GATCAAAAA	ATTCGTGAAA	CCGTGCGTGA	TAAACGTGTC	CTTCTTGCTC	TATCAGGTGG	7440
TGTTGACTCA	TCTGTCTGTG	GGGTCTCTCT	CCAAAAAGCG	ATTGGCGATC	AATGTGATCG	7500
TATCTTCGTA	GACCAAGGTC	TTCTTCGTAA	AGGCGAAGCT	GATCAAGTTA	TGGACATGCT	7560
CGGTGGTAAG	TTTGGTTTGA	ATATCGTCAA	AGCAGACGCT	GCTAAACGTT	TCCTTGACAA	7620
ACTTGCTGCC	GTCTCTGACC	CTGAACAAA	ACGTAAAAATC	ATCGGTAACG	AGTTTGTCTA	7680
TGTATTTCGAT	GACGAAGCAA	GCAAGCTCAA	AGATGTGAAA	TTCTTTGCTC	AAGGTACTTT	7740
ATATACAGAT	GTATTCGAGT	CTGGTACGGA	TACAGCTCAA	ACTATCAAGT	CACACCACAA	7800
CGTGGTGGTC	TTCCAGAAGA	TATGCAGTTT	GAATGTAGTT	AACCACTCAA	TACTCTTTTAC	7860
AAGGATGAAG	TTCTGTCTCT	TGGTACAGAG	CTTGGTATGC	CAGACCATAT	CGTATGGCGC	7920
CAACCATTC	CAGGACCAGG	ACTTGCTATC	CGTGTCAATG	GTGAAATCAC	TGAAGAGAAA	7980
CTTGAAACCG	TTCTGTGAATC	AGACGCTATT	CTTCTGTGAAG	AAATCGCTAA	AGCTGGACTT	8040
GACCGGATA	TTTGGCAATA	CTTCACTGTT	AACACAGGCG	TTCTGTTCACT	CGGTGTTATG	8100
GGTGACGGTC	GTACGTATGA	CTACACGATT	GCAATCCGTG	CTATCACTTC	TATCGATGGT	8160
ATGACTGCTG	ATTTTGCCAA	AATTCATG	GAACTACTTC	AAAAATCTC	ACTACGTATC	8220
GTAAATGAAG	TGGATCATGT	TAACCTATC	GTCTACGATA	TTCAAGTAA	ACCACCTGCA	8280
ACAGTTGAGT	GGGAATATC	GCAAAAAAAT	TAAAGCTTT	GTAAATCAA	CGGTTACAGA	8340
GGATTAAAA	CTGTACTGG	GATTAATAAC	GGAACATTTG	CTAAAJAGAA	TAAATGAAT	8400
AATAGTTCCA	AGTGGTTTAC	ATTTGGACAA	AAAAATTAGC	CGTAGTTTTC	AAGCTGCGGT	8460
CTTTTGATAT	ATATAATGAG	AATTAATGCG	TCTTTGTCAA	CTGTACTGGG	TTGAAGTCAG	8520
CTAAGCTCGA	GAAAGGACAA	ATTTGTCTCT	TTCTTTTGTG	ATATTACAG	CGATAAAAA	8580

1037

CCGTTTTTG AAGTTTTC	AGTTCGGAAA	ACCAAAGGCA	TTGCGCTTGA	TAAGTTTGAT	8640
GAGATTATPG	GTGCGTTCCA	ATTTGGCGTT	AGAATAGTGT	AGTTGAAGGG	8700
TTTCTCTTTG	TCCTTTAGAA	AGGTTTTAAA	GACAGTCTGA	AAAGAGGAT	8760
			GAACCTGCTT		
TAGATTGTCC	TCAATGAGTC	CGAAAAATTT	CTCCGGTCC	TTATTCTGAA	8820
				AGTGAACAG	
CAAGAGTTGA	TAGAGCTGAT	AGTGATGTTT	CAAGTCTTGT	GATAGCTCA	8880
				AAAGCTTGTT	
TAAAATCTCT	TTATTGGTTA	AATGCATACG	AAAAGTAGGG	CGATAAAAAAT	8940
				GTTTATCGCT	
GAGTTTACGA	CTATCCTGTT	GTATGAGCTT	CCAGTAGCGC	TTGATAGCCT	9000
				TGTATTTCATG	
AGACTTTTGA	TCCAATTGAT	TCATGATTTG	AACACGCACA	CGACTCGG	9048

(2) INFORMATION FOR SEQ ID NO: 160:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 10399 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

GTACCTTTAT	TGATGAATGG	ACTGTTTAAA	TCAGTAGCAC	GCCAAACCAGA	TATGCTTTCT	60
GAGTTTCGTA	GTTTGATGTT	TTTAGGTGTT	GCCTTATPTG	AAGGAACCTT	CTTTGTAACT	120
CTTGCTCTTCT	CATTTATTAT	CAATAAATA	CATGGAACGA	GAAGAAAAGG	GAGGATTTTA	180
GATGGAAGAA	AGTATTAAATC	CAATCATCTC	TATTGGTCCT	GTTATCTTCA	ATCTGACTAT	240
GTTAGCCATG	ACITTTGTGA	TTGTGGGAGT	TATTTTGTCT	TTTATTATT	GGGCAAGCCG	300
CAATATGACC	TTGAAACCCA	AAGGAANGCA	AAATGTACTT	GAGTATGTCT	ATGACTTTGT	360
TATTGGATTT	ACGAACCTTA	ACATTTGGTTC	GGCTACATG	AAGATTACT	CACCTTTTTT	420
CCTTTGTTTA	TTCTTTTICA	TGGTGATTGC	CAATAACCTT	GGCTTAATGA	CAAAGCTTCA	480
AACGATCGAT	GGGACTAACT	GGTGGAGTTC	GCCAACCGCT	AATTACAGT	ATGACTTTAC	540
CTTATCTTTT	CTTGTCATTT	TGTTGACACA	TATAGAAAGC	GTTCTGCTGC	GTGGAATTAA	600
AAAAAGTATA	AAATCTTTTA	TGAGTCCTGT	TTTTGTGATA	CCGATGAATA	TCTTGAAGA	660
ATTACAAAC	TTCTTATCTT	TGGCTTTGCG	GATTTTGGG	AATATCTTTG	CAGGAGAGGT	720
CATGACGAGT	TTGTACTTTC	TTCTTTCCCA	CCAAGCTATT	TATTGGTATC	CAGTAGCCTT	780
TGGAGCTAAT	TTGGCTTGA	CTGCATTTTC	TGCTTTTATT	TCCTGCATCC	AAGCTTATGT	840
TTTATCTCTT	TTGACATCTG	TGTATTTAGG	GAATAAGATT	AATATTGAAG	AGGAATAGAA	900

1038		
AGGAGTAACT GATGCACGTA ACAGTAGGTG AATTAATTGG TAAFTTTAAT TTAATCACTG	960	
GCTCTTTTAT TCTTTTGCTA GTCTTGATTA AAAAATTTGC ATGGTCTAAT ATTACAGGCA	1020	
TTTTCGAAGA AAGAGCTGAA AAAATTGCTT CAGATATTGA CAGAGCTGAA GAAGCCCGTC	1080	
AAAAGCAGA AGTATTGGCT CAAAAACCGG AAGATGAATF GGCCTGCTAGC CGTAAAGAGG	1140	
CTAAGACAAT CATTGAAAT GC AAAAGGAAA CAGCTGAGCA AAGTAAGGCT AATACTTTAG	1200	
CAGATGCTAA ACTAGAAGCA GGACACTTAA AAGAAAAAGC CAATCAAGAA ATTGCTCAAA	1260	
ATAAAGTAGA AGCTTTACAG AGTGTTAAGG GTGAGGTGCG AGATTTGACC ATCAGCTTAG	1320	
CTGGTAAJAT CATCTCACAA AACCTTGACA GTCATGCCCA TAAAGCACTC ATTGATCAGT	1380	
ATATCGATCA GCTAGGAGAA GUTTAATGGA CAAGAAAACA GTAAAGGTAA TTGAAAAATA	1440	
CAGCATGCCT TTTGTCCAAT TGGTACTTGA AAAAGGAGAA GAAGACCGTA TCTTTTCAGA	1500	
CTTGACTCAA ATCAAGCAAG TTTGTGAAAA AACAGGTCGT CCTTCTTTT TAAAAAAGT	1560	
GGCAGTAGAC GAGTCGATA AGGAAAAAAC AATTGCTTTT TTCCAAGATT CTGTGTCGCC	1620	
TTTATTACAA AACTTTATCC AGGTTCTGCC CTACAATCAC AGAGCAAAATC TTTTTTATGA	1680	
TGTGCTTGTA GATTGCTTGA ACCGACTTGA AAAAGAAACA AATCGATTGG AAGTGACGAT	1740	
TACGCTGTCT CATCTCTTAA CTGATGAACA GAAGACTCGT TTGCTCCCTT TGATTGAGAA	1800	
AAAAATGCTT CTGAAAGTAA GGAGTGATAA AGAACAAATC GATGAAAGTC TCATTGGTGG	1860	
TTTTGTCAAT TTTGCCAATC ACAAGACAAAT TGATGTGAGT ATTAACAACAC AACTTAAAGT	1920	
TGTTAAAGAA AATTTGAAAT AGAAAGTGGT GTTCTTTTGG CAATTAACGC ACAGAAATC	1980	
AGCGCTTAA ITAAGCAACA AATTGAAAAAT TTCAAACCCA ATTTTGATGT GACTGAAACA	2040	
GGTGTGTAA CCTATATCGG GGACGGTATC GCGCGTGCTC ACGGCTTGA AAATGTCATG	2100	
AGTGGAGAGT TGTTGAATTT TGAAAAAGGC TCTTATGGTA TGCGTCAAAA CTGGAGTCA	2160	
ACAGACGTTG GTATTATCAT CCTAGGTGAC TTTACAGATA TCCGTGAAGG CGATACAAATC	2220	
CGCCGTACAG GGAATAATCAT GGAAGTCCCT GTAGGTGAAA GTCTGATTGG TCGTGTGTG	2280	
GATCCGCTTG GTCGTCCAGT TGACGCTCTT GGAGAAATCC ACACGTGATAA AACTGCTCCA	2340	
GTAGAAGCAC CAGCTCCTGG TGTTATGCAA CGTAAGTCTG TTTCAGAACCC ATTGCAAACT	2400	
GGTTTGAAAG CTATTGACGC CCTTGTAACG ATTGGTCGTG GTCAACGTGA GTTGATTATC	2460	
GGTGACCGTC AGACAGGGAA AACAACCAAT GCGATTGATA CAATCTTGAA CCAAAAAAGAT	2520	
CAAGATATGA TCTGTATCTA CGTCGCGATT GGACAAAAAG AATCAACAGT TCGTACGCAA	2580	
GTAGAAACAC TTGCTCAGTA CGGTGCTTGG GACTACACAA TCGTTGTGAC AGCCTCTGCT	2640	
TCACAACCAT CTCCATTGCT CTTCTTAGCT CTTATGCTG GGGTTGCTAT GCGGAAGAA	2700	

TTTATGTATC	AAGGTAAGCA	TGTTTTGATT	GTATACGATG	ATCTATCAAA	ACAAGCGTA	2760
GCTTATCGTG	AACTGTGCT	CTTGCTTCGT	CGTCTCCAG	GTCTGGAAGC	CTTCCCAGGG	2820
GATGTTTTCT	ATCTCCACAG	CGTTTGCTT	GAGCGTCAG	CTAAAGTTTC	TGATGAACCT	2880
GCTGGTGAT	CAATTACAGC	CTTACCAATT	ATCGAGACAC	AAGCAGGAGA	TATCTCAGCC	2940
TATATCGCAA	CCAACGTGAT	TCTATCACT	GATCGACAAA	CTTCTCTGG	CGATGGCCTC	3000
TTCAATGCAG	GATTTCGTCC	AGCCATCGAT	GCGGTTTCAT	CTGTATCTCG	TGTAGTGGT	3060
TCTGCACAAA	TCAAAGCCAT	GAAGAAGGTT	GCTGGTACAC	TTCTATCGA	CCTTGCTTCA	3120
TACCGTGAGT	TGGAAGCCTT	TACTAAGTTT	GGTCTCGACT	TGGACGCAGC	AACACAGGCT	3180
AAGTTGAACC	GTGACGTCG	TACCGTTGAG	GTCTTGAAAC	AACCTGTCCA	CAAACCATTA	3240
CCTGTGTAGA	AACAAGTAAC	CATTCTTTAT	GCTTTGACAC	ATGGTTTCTT	GGATACTGTT	3300
CCAGTAGATG	ATATTGTTGG	TTTCGAGGAA	GAGTTCATG	CCTTCTTTGA	TGCTCAACAT	3360
CCAGAGATTT	TGGAACCAT	TCGTGATACA	AAAGACTTGC	CAGAGAAGC	AGTCTGGAT	3420
GCTGCGATT	CAGAGTTCT	CAATCAATCT	AGCTTCCAAT	AAGAATAGAG	GTGTCAGATG	3480
GCAGTATCTC	TAAATGATAT	TAAAACAAAA	ATCGCTTCAA	CAAAAAATAC	GAGTCAAACT	3540
ACTAATGCCA	TGCAAAATGTT	ATCGGCTGCT	AAGCTAGGTC	GTTCTGAAGA	AGCTGCTCGC	3600
AACTTCCAAG	TTTACGCTCA	GAAAGTGGT	AAACTTTTGA	CAGATATCCT	TCAATGTTAAT	3660
GGAGCTGGTG	CTTCAACTAA	TCCGATGTTG	ATTAGCCGTT	CTGTGAAGAA	GACAGGCTAT	3720
ATCGTATACA	CTTCAGACCG	CGGTTTGTTT	GGAGTTTATA	ATTCTCTAT	TTTGAAAGCT	3780
GTATATGGAGT	TGAAAGAAGA	ATACCACCCA	GACGGTAAAG	GTTTTGAAAT	GATCTGTATC	3840
GGTGGGATGG	GAGCTGATTT	CTTTAAGGCT	CGGGTATTC	AACCACTTTA	TGAATTACGT	3900
GGCTGTGTCAG	ACCAACCTAG	CTTTGATCAA	GTTCGTAAGA	TTATTTCAA	AACTGTGAA	3960
ATGTACCAAA	ATGAACCTTT	TGATGAGCTT	TATGTTTGCT	ACAACCAACA	TGTCAATACG	4020
CTAACAGCTC	AAATGCGTGT	GGAAACAATG	CTCCGATTG	TTGACTTGGA	TCCAATAGAA	4080
GCGAGTGAAG	AGTACAGCTT	GACTTTTGAA	TTGAAACCA	GCCGAGAAGA	AATTCGGAG	4140
CAGTGTGTCG	CTCAGTTTGC	AGAAAAGTATG	ATTACGGTG	CCATTATCGA	TGCCAAGACA	4200
GCTGAGAAATG	CTGCGGGCAT	GACAGCCATG	CAACACGCA	CAGATAATGC	TAGAAAATGC	4260
ATCAATGATT	TGACAATTCA	GTAATAACCGT	GCCACAGAG	CGGCGATTAC	ACAAGAAATT	4320
ACAGAAATCG	TAGCAGGTGC	TAGTGCTTA	GAAAGGCTC	TAGTCCAGCT	CGTATGAAAA	4380
TGAATTTAGG	ACCTAGTTGA	GCTAGGAACC	GACAGTATCT	TATATAGAAAT	AGGAGAAGGA	4440

1040	
GATGAGTTCA GGTAAATPG CTCAGTTAT CGTCCCGTT GTAGACGTTT TGTTCGAGC	4500
AGGGGAAAAA CTTCTTGAGA TTAACAATGC ACTTGTCTC TACAAAAATG ACGAAGAAA	4560
AACAAAAATC GTCTTGAGG TAGCCTTGGA GTTAGAGAT GGTATGTTCT GTACTATCGC	4620
CATGGAATCA ACAGATGGGT TGACTCGTGG AATGGAAGTA TTGGACACAG TCGTCCAAAT	4680
CTCTGTACCA GTAGGTAAAG AAACCTTGGG ACGTGTCTC AACCTTTTGG GAGATACCAT	4740
TGACTTGGA GCTCCTTTTA CAGAAGACG AGAGCGTCAG CCAATTCATA AAAAGCTCC	4800
AACCTTTGAT GAGTGTCTA CCTCTTCTGA AATCCTTGAA ACAGGGATCA AGGTTATTGA	4860
CCTTCTTGCC CTTTACCTTA AAGGTGGTAA AGTTGGAGT TTCGTGGTG CCGAGTTGG	4920
TAAACTGTC TTAATCCAAG AATTGATTCA CAACATTGCC CAGAGACAG GTGCTATTTC	4980
AGTATPTGCT GGTGTGGGG AACGTACTCG TGAGGGGAAT GACCTTTACT GCGAAATGAA	5040
AGAATCAGGC GTTATCGAGA AACAGCCAT GGTCTTTGGT CAGATGAAT AGCCACCAGG	5100
AGCACTATG CGTGTGCC CTTACTGGTTT GACAATCGCT GAATCTTCC GTGATGTGGA	5160
AGGCCAAGAC GTGCTCTCT TTATCGATAA TATCTTCGT TTCACTCAGG CTGGTTCAGA	5220
AGTATCTGCC CTTTTGGTC GTATGCCATC AGCCGTTGGT TACCAACCAA CACTTGCTAC	5280
GGAAATGGGT CAATTGCAAG AACGTATCAC ATCAACCAAG AAGGTTCTG TAACCTCTAT	5340
CCAGGCTATC TATGTGCCAG CGGATGACTA TACTGACCCA GCGCAGCAA CAGCCTTCGC	5400
TCACTTGGAT TCAACACAA ACTTGGAAAG TAAGTTGGTA CAATGGGTA TCTACCCAGC	5460
CGTTGACCCA CTTCCTTCAA GCTCACGTGC CTGGCACCT GAAATCGTG GAGAAGAGCA	5520
CTATGCAAGT GCTGCTGAAG TAAAACGTGT CTTCAACGT TACCATGAAT TGCAAGATAT	5580
CATTGCTATC CTGTGTATG ATGAGCTTTC TGATGAAGAA AAGACCTGG TTGCTCGGC	5640
CCGTGCTATC CAGTTCTTCT TGTCAAAAA CTCAACGTT GCGAACAAT TTAAGGTGCA	5700
GCCAGTTCT TATGTTCCAG TTGCTGAAAC TGTACGTGC TTAAAGGAA TCCTTGATGG	5760
TAAATACGAC CACTTGCCAG AAGATGCCTT CCGTGGTGT GGTCTATCG AAGATGTGAT	5820
TGCAAAAGCT GAAAAAATGG GATTTTAAGA GGTGATCTAT GGCTCAGTA ACTGTCCAGA	5880
TCGTGACACC AGATGGTCTC GTCTATGATC ACCATGCCAG CTATGTATCG GTTCGAACAT	5940
TGGATGGTGA GATGGGGATC TTGCCACGAC ATGAAAAAT GATTGCGGTT TTAGCAGTTG	6000
ATGAAGTAAA GGTAAAACGT ATCGATGATA AAGATCACGT GAACCTGATT GCAGTAAACG	6060
GTGGCGTTAT TGAAATGGCC AATGATATGA TCACAAATGT CGTGACTCT GCAGAACGTG	6120
CTCGATGAT CGATATCAGT CGTGACGAAC GTGCCAAAT TCGTGACGAA CGTGCAATTG	6180
AAGAAGCACCA AGACAAACAT TTGATTGACC AAGAACGTGC TGCTAAGATT GCTTTGCAAC	6240

1041

GTGCTAATTA	CCGTAATTAAT	GTGCGGAAATA	GACTATAAGA	AAAAATGAAC	TTGAAAATAC	6300
CAAGTTCATT	TTTTATGGTG	TTTTAAGGAG	CAAAACGGAT	GCAGACTGCT	TCGGGAACAT	6360
GGAAGTCGTT	GGAGAGTCT	GCTAGACGAC	CATTGTACAC	ATTACGTTTA	AAGACAGTTG	6420
CATTGTTCAG	GTCTTGATGG	ACAACAATGA	GAATTTTTTG	GTGCGGTGTC	AAATCAAAAT	6480
CACGTGGAGT	CTGACCATGC	GTGGAACGA	TTCTTAATAA	CTCTAAGCTA	CCGTCCGCAA	6540
GGATGGTATA	TACTGCGATA	GAATCATGGC	CACGGTTAGA	AGCGTAGAGG	TATTTACCGT	6600
CTTTAGAGAG	ATGAATAGCA	GCGGTTCCT	TAAAGCCTTC	GTAAGCTTCC	GGTAAAGTTG	6660
AAATGACCTG	CATACGTCCA	AAATGCGCAA	CGCCATCGTA	GATTAAAAT	TCGATAGTAC	6720
TATTGAGTTC	ACAAATGAGA	TAAAGCATTT	TATAGTGGTT	ATGGAAAATG	ATATGGCGTG	6780
AGCCTGCTCC	TGGCTTGCTG	TGATAGGTAT	AGAGCTTAGA	TAAATTTTCT	TCATTGATCGA	6840
GGTCATAGGT	GATGACTTGG	TCAGTTCCCA	ATTCGCAAGT	CACTAGATAG	TGGTCAGGTG	6900
TTAAATCTGT	ATAGTGAAAC	TGGGGGGAAG	CTTGATTTTT	ATGTGGACCT	TGGCCACTGT	6960
GTGTATCCAT	ATCATAAGT	AGAAGACTAC	CATCTTCCCT	GCGTTTATAA	ACAAGGACTT	7020
GTCCCTTGTG	ATAGTTAGCT	GCGTAAACCA	AATCACCGTT	TTTATCGACA	GCAACATAAC	7080
AGTGGGGAGC	TCTTCTTCCA	ACAACATGAT	TTAACACAGT	CCCGTCAGTT	TGATAGGCTG	7140
CAATTCGCCCC	CTTATCGTCT	TGGCTACCAA	CAGTGTATTA	ATGTTGGTGC	TGGTCAAAGG	7200
CAAGGTAGGT	TGGACTTGGC	TCAGCTQCAA	AAAGTTCTAG	ATTTGAAAGC	TGACCAGTTT	7260
CTGTATCAAA	GTCTGCCTTG	TAAATCCTTT	GAGAAGTACG	ACGTGTATTA	GTTCCAAAT	7320
AAACAGTTTC	TTTCATTACT	ATACCTCTGT	GTAAGATTA	GACTATTATA	TCACAAAAAC	7380
AAGTAAATTA	AAGATATCCA	ATTAGATGTA	AGCACTTTAA	AAAAGAGTTA	TTTTGTTTCA	7440
AAATGGTAT	AATGAGAGAA	CAATAGAAAG	GAGTATTTTA	TGGAGCAAAA	AGAGAAACAT	7500
TTTAGCCTAT	CTTGGTTTTT	CAAGTGGTTT	TTAGATAACA	AGGCAATTAC	GGTATTTTTA	7560
GTAACTTAT	TATGGGACT	GAATCTTTTT	ATTTTAGTA	AGATTAGTTT	TCTATTTTCA	7620
CTTGTTTTAG	ACTTTTTAGC	AGTTGTGATG	TTGCCAGTCA	TTTTGTCTGG	TTTGTATAT	7680
TATTTGTGTA	ATCCTATTGT	TGATTGGATG	GGAAGCATA	AGGTTAATCG	TGTATATAGCT	7740
ATCAGATTG	TCTTGTATT	CATCGCTCTC	TTTATCATTT	GCGGCTTGCC	AGTCGCCATT	7800
CCAAATCTGC	AACGTCAGST	TTTGACCTTT	GCAAGAAAGC	TTCTGTTTAA	CTTAGAAGAT	7860
ATPAGATAGGA	TTGTTAATGG	ATTGGTAGCC	CAGCACCTGC	CAGATGATTT	CAGACCTCAA	7920
TTAGAGCAAG	TTTTGACCAA	TTTTTCTAGC	CAGGCTACAG	TTTTGGCAAG	TAAGGTTTCA	7980



1042

TCTCAGGCAG TCAACTGGGT GAGTGCCTTT ATTAGCGGG CTTCTCAAGT GATTGTTGCC	8040
TTGATTATCG TTCTTTTCAT GCTCTTTTAT CTCTTGCCTG ATGGGAAGG CTTGCGTAAC	8100
TATTTGACCC AATTCAATCC AAGAAAATTG AAGGAACCTG TTGGACAAGT TTTATCAGAT	8160
GTGAATCAAC AGTTGTCCAA CTATGTTCTGA GGGCAAGTGA CAGTGGCTAT TATTGTAGCA	8220
GTAAATGTTA TCATCTCTTT CAAGATTATT GGTCTACGCT ATCGGGTTAC GCTGGGGGTT	8280
ACTGCTGGTA TTTTAAATCT GGTCCCTTAT CTTGCTAGCT TTTAGCCAT GCTTCCTGCT	8340
CTAGTATTGG GTTTGATGTC TGGTCCAGTC ATGCTTTTGA AAGTAGTGAT TGTCTTTATC	8400
GTAGAACAAA CTATTGAAGG CCGTTTTGTC TCTCCATTGA TTTTGGGAG TCAATTA AAC	8460
ATCCACCCTA TTAATGTTCT CTTTGTGTTG TTAACCTCAG GATCTATGTT TGTATCTGG	8520
GGAGTTTAC TTGATATTCC GGTATTATGCC TCTGCTAAGG TTGCTATTTC AGCCATTTC	8580
GAATGGTATA AGGTAGTCAG TGGTCTATAT GAATTAGAGG GTGAGGAAGT CAAGAGTGAA	8640
CAATAGTCAA CAGATGTAC AGGCTTTGGA GGAGCAAGAT TTAACTAAGG CTGAGCATTA	8700
TTTCGCCAUA GCTTTAGAAA ATGATTCAGG TGATCTCTCT TATGAATTGG CAACCTTATCT	8760
TGAAGGAGTT GGTTCCTATC CTCAGGCCAA GGAAATTTAC CTGAAAAATG TAGAGGATTT	8820
TCCAGAGGTT CATCTTAATC TAGCTGCAAT TGCTAGCGAG GATGCTCAA TAGAAGAAC	8880
CTTTACCTAT CTTGAGGAAA TCCAAGCTGA CAGTGACTGG TATGCTCTGT CTTTGGCTCT	8940
GAAAGCAGAC CTTTACCAGG TGGAAAGTTT GACAGATGTG GCACGTGAGA AATTATTGGA	9000
GGCCTTGACC TACTCAGAGG ATTCTCTCTT GATATTTGGT TTGGCAGAGT TGGATAGTGA	9060
GTGGAJAAT TACCAAGCGG CTAATCAAGC CTATGCCCAG TTAGATATTC GCTCGATTTA	9120
TGAGCAAAAG GGCATTTCCA CCTATCAACG AATTGSCCTT GCCTATGCTC AGTTAGGAA	9180
ATTTGAAACG GCTACTGAGT TTTTAGAAAA AGCCCTGGAG TTAGAATACG ATGACTTAAC	9240
AGCTTTTGAG TTGGCCAGTC TTTATTTTGA TCAAGAAGAA TATCAAAAAG CCACCTCTTA	9300
CTTTAAGCAG CTTGATACCA TTTCTCTCTGA CTTTGAAGGC TATGAGTATG GGTACAGTCA	9360
GGCTTTACAT AAGGAACATC AAGTTCAAGA AGCCCTGCGT ATCGCTAAGC AAGATTAGA	9420
GAAAAATCCC TTTGAACTC GCCCTCTGCT AGCTGCTTCA CAATTTTCTT ATGAATGCA	9480
TGATGCTAGT GGTGCAAGAA ATTATCTCTT TACTGCAAAA GAAGACGCTG AGGATACAGA	9540
AGAAATCTTG CTTCGTTTAC CCACTATTTA TCTGGAGCAG GAGCGTTATG AGGATATTCT	9600
AGAAATGCGAG AGTGAGGAGC CAGAAAATCT TTTGACCAGG TGGATGATTG CTCGTTCTTA	9660
TCAGAAATG GACGATTGAG ATACTGCTTA TGAGTATTAT CAAGAGTTGA CAGGAGATTT	9720
GAAAGCAAT CCAGAAATTC TGGAACTA TATCTATCTC TTGCTGAAT TGGACATTTT	9780

1043

TGAAGAAGCA	AAAGTCCATG	CTCACACTTA	CTTAAAACTG	GTTCAGATG	ATGTGCAAA	9840
GCAAGAAGTG	TTTGAGAGAT	TGTAAGAATG	TTTAACCCAA	ATCATTCATA	CCTCTCTCAA	9900
CTAGATGTAA	CTTACAAAAC	CCCTGACCTC	ATGAGCCACT	TTCTTCCTCC	TCATGAGGTC	9960
AGTCTTACTT	TCTGCTGTTC	CAGTATCGTT	TTTCCTCGCT	AGATTTCCTC	AAAAGGGCAG	10020
ACTCCTCCCT	TGGTGGGTCA	CACGATTTTT	TCATCTCGAC	TGTTCTTTAA	TGCATCATT	10080
ACGAGCGTTT	TCTCTAGGT	GGTTCATAAG	GAACAGGAAG	ATTTCAGTTG	ACTTTTCTAA	10140
TCCTAGAATA	AAGTGCTGAA	AACAATTCGG	AATAGGCATA	GAGACTAGAC	AATTTGAGGA	10200
GCTGCTTGCG	TCTGTGCGA	ACACATTTTC	CCACCACGTG	AAGAAAAAGA	TGGCGGAAGC	10260
GTTTGATTGT	TAAAGTTTGG	AAGTACCTC	CAGCTAGATG	TTTGAGAAAA	AGATAGAGAT	10320
TGTAGGCGAT	ACAGCTCATC	ATCATACGAA	TTGCTTTTGT	ATTAAGGTTG	AACTATCCGT	10380
TTTATCGCCA	AAAAATCGG					10399

(2) INFORMATION FOR SEQ ID NO: 161:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 9409 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

GATAAGATTA	AGTTAGAAAA	GAAAGAACTA	GGACATATCT	ACCAGATTCA	GGTTTTTAAT	60
AGCTATGGGC	AGGAAGAAAT	CTATCGTGTG	ATTTTGATGG	AGACCAATAT	TAGTTCGGTT	120
TCAACCAATA	TCAAGTATGC	TGCTGTCTTG	ATTAATACCA	GTCAAGTTGA	ACAGGCTAGT	180
CAAAAGCATG	AGCAATTGAT	TGTGGTCGTG	ATGGCTAGTT	TCTGGATTTT	GTCTTTACTT	240
GCCAGTCTCT	ATCTAGCTAG	GGTCAGTGTT	AGGCCCTGCG	TTGAGAGTAT	GCGAAGCAAA	300
CAGTCTTTTG	TGGAAATGC	CAGTCATGAG	TTACGAACCT	CACTCGCAGT	TTTGCAAAAT	360
CGCTTAGAGA	CCCTTTTTCG	TAAGCCAGAA	GCTACCATTA	TGGATGTGAG	CGAAAGCATT	420
GCATCGAGTT	TGGAAGAGT	CCGAATATG	CGTTTTTTAA	CGACAAGCTT	GCTGAACCTA	480
GCTCGGAGAG	ATGATGGGAT	TAAGCCGAG	CTTGCAAGAG	TTCCAACTAG	CTTTTTTAAT	540
ACAACCTTCA	CAAACTACGA	GATGATTGCT	TCGGAATAAT	ATCGTGTCTT	CCGTTTTGAA	600
AATCGTATCC	ATCGAACAA	TGTCACAGAT	CAGCTTCTTC	TGAACAACCT	GATGACCAAT	660
CTTTTCGATA	ATGCCGTCAA	GTATACTGAG	GAGGATGGTG	AAATTGATTT	TCTTATCTCG	720

1044		
GCGACCGATC GCAATCTTTA TTTACTTGTT TCTGATAATG GAATCGGTAT TTCACAGAA	780	
GATPAAAGA AAATTTTGA CCGTTTTAT CGAGTAGACA AGGCTAGAAC CCGGCAAAAA	840	
GGTGGTTTGG GTTTAGGATT ATCCCTAGCC AAGCAAATTC TAGATGCTCT AAAAGGAAC	900	
GTTACTGTCA AAGATAATA ACCCAAGGA ACANTCTTTC AAGTGAAGAT TGCCATTTCAG	960	
ACACCATCTA AAAAGAAAA ATAAAAATAT CGCTCCAATT GGGCGATAT TTTGGATTTA	1020	
TCTTCTAGCT TTTCTTTGA TAATAGACCG TTGAACCTTT AAAACAAGTA AGCTGAATCC	1080	
GATTGCTGCG GCAAAGGCAA GAGCAGTTGA TAATTTTAAT GCTAAAAAGA TAAACTATA	1140	
GATAGCAATA CAGATACAAA AAACAGCGAT ATTAATAAAA AATAGGATTT CTTGAGATT	1200	
GGCATCAGAT TGGGCTTCAG GTGTATAAGC TTGGTAATGA GGAAGCTGCT GGTTTAATTC	1260	
TTCTTGATAG TCTACCTCAT AGGATTGTAA TTTTCTTACG GGCATGATTC TCTCCTTAA	1320	
AGTACATACC TATTTTATCA TTTTTCGGC AGAGAAATTA TACAGAAAGG TTACAAAAAG	1380	
AATAAGTCC CTTTTCATT TCAAAGCATG GCTGATTTG GAGAAATGG GTATAATTTT	1440	
TCTTATGGAA AAGATTGTCA TTACAGCAAC TGCTGAAAGT ATTGAACAAG TTGAACAAC	1500	
ACTGAAAGCT GGGTAGAGC GTATCTATGT CGGTGAGAAA GATTTTGGTC TTGCTCGCC	1560	
AACGACCTTT AGTATGACC AATTACGTGA AATCGCTAAG TTGGTTTCATG ATGCTGGTAA	1620	
GGAAATGATC GTTGGGGTCA ATGCTCTCAT GCACCAAGAT ATGATGGACC GTATCAAGCC	1680	
TTTCTTAAAC TTCTTGAAG AAATCAAGAC AGACTATATT ACGATTGGGG ATCGAGGGCT	1740	
CTTTTACGTA GTTAAACCGC ATGGTTATTC ATTTAAGACC ATCTACGATG CTTCAACCAT	1800	
GOTAACTAGC AGTCGTCAGA TTAACCTCTG GGGACAAAAG GCTGGCGCAT CTGAGGCGT	1860	
TTTGGCGCGT GAAATCCAT CAGCTGAAC TTTCAAAATG CCAGAGATT TGGAAATTC	1920	
TGCTGAAGTT TTGGTTTACG GTGCTAGCGT CATCCATCAT TCTAAACGTC CACTCTTGCA	1980	
AAACTACTAT AACTTTACAC ATATCGATGA TGAAAAGACG CATAAACGTG ACCTCTTCTT	2040	
GCTGAGCCA AGTGATCCAG AGAGCCACTA TTCCATTTT GAAGATAATC ATGGGACCCA	2100	
TATCTTTGCC AACATGACC TTGATTTGAT GATCAAAATTA ACAGAATTGG TGGAGCATGG	2160	
CTTTACTCGC TGGAACTAG AAGGGCTCTA CACTCTCGGT CAGAACCTTG TTGAGATTGC	2220	
AAAACCTCTT ATCCAAGCGC GTAGCTTGAT TCAAGAGGCG AACTTTAGTC ATGCTCAAGG	2280	
CTTCTGTCTG GATGAAGAAG TTGCTAAACT TCACCTATAA AACCTTTCC TTGATCAGG	2340	
ATTTTATGAC TACGATCTCG ACATGGTTAG ATAAAAATA TGATTGCTTG AGAGAAGGAA	2400	
GATGCAAAAC TTTCTTCTCT CAATTTTTGG TATTTCTTCA CTATTTTACA AAAATCAGCA	2460	
GGCTAGAATG CTCTATTGCA TGGGATTTTT AAGAAAAGTA GTGTCTTGA GTTTGAAAT	2520	

1045

TATCCTATGT	TTGCAGGTGC	CAAAATGGCCC	TTTTTTGGGT	ATAATTTTTT	ATAATGAAAA	2580
CGATTGGTAA	TCGCTATGTT	GTGGTGGATT	TAGAGGCAAC	TAGCACAGGT	AGTAAAGGCTA	2640
AAATTAATCCA	AGTGGGAATT	GTCTGTATTG	AGGACGGAGA	AATCGTCGAT	CACTATACGA	2700
CGGATGTCAA	TCCACATGAA	CCCTTGGATG	CTCATATCAA	AGAACTGACA	GGATTGACAG	2760
ACCAACGTCT	GGCGCAAGCA	CCTGATTTTT	CGCAAGTTGC	CAGAAAAATA	TTTGACTTGG	2820
TGGAGGATGG	GATTTTTGTA	GCCCATAAAT	TTGAGTTTGA	TGCTAATCTC	TAGCGGAAAA	2880
ATTTAATTTTT	TGAAGGCTAT	GAGCTAAGAA	ACCCCTCTGT	TGATACGGTC	GAATTGGCCC	2940
AGGTCTTTTT	CCCTGAACCT	GAAAAATATA	GCTTGCCGAT	TTTGTGTGCA	GAATTAGGAA	3000
TTCTCTTAA	ACACGCACAC	ACAGCCCTTT	CAGATGCCCA	AGCTACAGCA	GAATTACTTC	3060
TTTTTTTACG	GAAAAAGATG	ACCCAGCTTC	CTAAAGGTCT	CTTGGAACGC	TTGCTGGAAA	3120
TGGCTGACGC	TCTCTATAT	GAGTCTTACC	TGGTTAATGA	GGAACTTAT	CGCAACCAAT	3180
CTATCCTGAG	TCTCTCAGAC	TTGGTCCATG	TTCAAGGTCT	ATATTTTAA	AAAACGGAA	3240
CTTCTCTGGA	GCCACGAAAA	CTATCTCAAG	ACTTTCTTAA	AAATAITTTCT	CTGTTGAACC	3300
TTGAAGTGAG	GGAGGAACAA	GAAAGTTTTG	CTAAAGAGGT	TGGCTTGTCA	TTGAAGATG	3360
AACCTGTCTC	TCTGATTCAA	GCGCCGACAG	GGATTGGGAA	AACCTATGGC	TATCTCTTAC	3420
CCGCTTTATC	TCAATCCAAA	GAGCGACAAA	TTGTTCTTAG	TGTTCCGACA	AAGATTCTTC	3480
AAAATCAAA	CATGGAAGAA	GAAGGTAAC	GCTCAAGGA	AGTGTTCAT	ACAGATATTC	3540
ATAGCTTAAA	GGGACCACAA	AATATCTGA	AGTGGATGC	CTTTATCAT	TCCCTGCAGG	3600
AAAATGATGA	AAATCGCTTA	TTTAGACGCT	TTAAATGCA	AGTCTTGGTC	TGCTTACTG	3660
AGACAGAGAC	AGGAGATTTG	GATGAATCG	GCCAACTCTA	CCGTTACCAA	CATTTCTAG	3720
CAGACCTTCG	TCAATGATGG	AATTTATCAT	CCCAGAGCTT	ATTTGTGACG	GAAGATTTTT	3780
GGAAACGTAG	TCAAGAAAGG	GCAGAGACTT	GCAAGCTTTT	AGTGACTAAT	CATGCCATCT	3840
TGTAACCAAG	ACTTGAAGAT	AATCCTGAAT	TTGTCAGTGA	CGTTTACTGT	ATTATATGATG	3900
AAGTCCAAAA	GATTTTGTGA	GCTCTAGAAA	ATCTGCTTCA	AGAGACCTAC	GATATACAAT	3960
CTATTATCGA	TTTAATTTAG	AAGGCTTTAG	TAGGAGAGA	AAACAGGGTT	CAACACGGGA	4020
TACTAGAAAG	TATTCGCTTT	GAGTGTCTCT	ACTTGATAGA	ACAATTTTCA	TCTGCAAAAT	4080
CTAGGAAAAA	TATCTTATAG	TCTCTGGACA	ATCTCCATCA	GTATTTTTCA	GAATTGGAAG	4140
TAGAAGACTT	TGATGAGCTG	GTTCGCTATT	TTACAGCTGA	AGGTGATTAC	TGGCTTGAAG	4200
TAACTGAAAC	GAGTCAAAAG	AAAATTCAGA	TTTCTTCTAC	AAAATCAGGC	CGTACTCTTC	4260

1946		
TGTCCTCTTT	ACTTCCTGAG	AGTTGCCAAG
4320	TCTTGGGAGT	ATCGGCTACT
CCTGAGATTA		
GTCCAGAGGGT	TTCTTTGGCA	GACCTTTTAG
4380	GCTATCCTGA	AGCTAAATTT
GTCAAGATTG		
AATCTCGGGG	AAAACAGGAA	CAAGAAGTGG
4440	TCAATGCTCA	AGATTTCCTT
CTGGTAACAG		
AAACCTCCTT	AGAAGTCTAT	GCCAGAGAGG
4500	TAGCTGCTTT	ACTAGTGGAA
MTTCAAGCTT		
TCGAGCAACC	GAITTTGGTT	CTCTTTACCG
4560	CTAAAGACAT	GCTTCTAGCA
GTATCGGATT		
TACTTACAGT	TAGCCACTTG	GCCAGATATA
4620	AAAATGGGGA	TGTTTATCAG
CTAAAGAAAC		
GCTTTGAAAA	AGGTGAACAA	CAAACTTTGC
4680	TTGCTGCAGC	AAGTTTCTGG
GAGGGAGTTG		
ATTTTTCGAG	CCATCCTTCT	GTGATTCAAG
4740	TTGTACCGAG	GCTTCTCTTC
CAAAAATCCTC		
AAGAACCTTT	GACGAAAAAG	ATTAAATCAAG
4800	AATGTAAATCA	AGAAGGGAAA
AATGCTTTTT		
ATGATTATCA	ATTGCCAATG	GCCATTATTC
4860	GTTTAAAAA	GGCTTTGGGA
AGAAGTATGA		
GACGTGAATA	CCAAAGCTTC	TTAACTCTTA
4920	TTTTGGATAG	GAGAATCGTC
GGAAAAAGAT		
ACGGGAAACA	AATAGTAGCA	TCTCTAGCAG
4980	AAGAAGCGAC	TGTTAAAAAC
ATCTCTCGAT		
CCGAAGTTGA	CGAGGCTATT	GATAGATTTT
5040	TTAATGAGCT	TTGATAAATA
GTATTGTATG		
AAAGTATAAG	GTTAGTATAT	ATGAAACGTT
5100	CTCTCGACTC	AAGAGTCGAT
TACAGTTTGC		
TCTTGCCAGT	ATTTTTTCTA	CTGGTCATCG
5160	GTGTGGTGGC	TATCTATATA
GCGGTTAGTC		
ATGATTATCC	CAATAATATT	CTGCCCATTT
5220	TAGGGCAGCA	GGTCGCCCTG
ATTCGCTTGG		
GGCTTGTGAT	TGGTTTTGTG	GTCAATGCTCT
5280	TTAATAAACA	ATTTCTTTGG
AAGGTGACCC		
CCTTTCTATA	TATTTTAGGC	TTGGGACTTA
5340	TGATCTTGCC	GATTGTATTT
TATAATCCAA		
GCTTAGTTGC	ATCAACGGGT	GCCAAAAACT
5400	GCGTATCAAT	AAATGGAAAT
ACCCATATCC		
AACCGTCAGA	ATTTATGAAG	ATATCCTATA
5460	TCTCTATGTT	GGCTCGTCTC
ATTGTCCAAT		
TTACAAAGAA	ACATAAGGAA	TGGAGACGCA
5520	CGGTTCCGCT	GGACTTTTGT
TTAAATTTCT		
GGATGATCTC	CTTTACCAAT	CCAGTCCTAG
5580	TTCTTTTAGC	ACTTCAAAGT
GACTTGGGGA		
CGGCTTTGGT	TTTTGTAGCC	ATTTTCTCAG
5640	GAATCGTTTT	ATTATCAGGG
GTTCCTTGGG		
AAATTTATAT	CCCAGTATTT	GTGACTGCTG
5700	TAAACAGGAT	TGCTGGTTTC
TTAGTATCTT		
TTATTTAGCAA	GGACGGACGA	GCTTTTCTTC
5760	ACCAGATTGG	AATGCCGACC
TACCAAAATTA		
ATCGGATTTT	GGCTTGGCTC	AATCCCTTTG
5820	AGTTTGGCCA	AACAACGACT
TACCAGCAGG		
CTCAAGGCA	GATTGCCATT	GGGAGTGGTG
5880	GCTTATTTGG	TCAGGGATTT
AATGCTTCGA		
ATCTGCTTAT	CCCAGTTGGA	GAGTCAGATA
5940	TGATTTTTAC	GGTTATTGCA
GAAGATTTTG		
GCTTTATTTG	CTCTGTCTCG	GTATTGTGCC
6000	TCTATCTCAT	GTTGATTATC
CGTATGTTGA		
AGATTACTCT	TAAATCAAA	AACCAGTTCT
6060	ACACTTATAT	TTCCACAGGT
TTGATTATGA		

1047

TGTTGCTCTT CCACATCTTT GAGAATATCG GTGCTGTGAC TGGACTACTT CCTTTGACGG	6120
GGATTCCCTT GCCTTTCATT TCGCAAGGGG GATCAGCTAT TATCAGTAAT CTGATTGGTG	6180
TTGGTTTGCT TTTATCGATG AGTTACCAGA CTAATCTAGC TGAAGAAAAG AGCGGAAJAG	6240
TCCCATTCAA ACUGAAAAG GTTGATTTAA AACAAATTAA ATAAGGAGAA AATCATGGTA	6300
AAAGTAGCAG TTATATTAGC TCAGGGCTTT GAAGAAATTG AAGCCTTGAC AGTTGTAGAT	6360
GTCTTGCGTC GAGCCAATAT CACATGTGAT ATGGTTGGTT TTGAAGAGCA AGTAACGGGT	6420
TCGATGCAA TCCAAGTAAG AGCAGATCAT GTCTTTGATG GAGATTTATC AGACTATGAT	6480
ATGATTGTTC TTCTGGAGG TATGCCCTGT TCTGCACATT TACGTGATA TCAGACCTTG	6540
ATTCAAGAA TGAAGCTT CGAGCAAGAA GGAAGAAAC TAGCAGCCAT TTGTCCGCCA	6600
CCAATTGCC TCAATCAAGC AGAGATATTG AAAAAAAGC GATACACTTG TTATGACGGC	6660
GTTCAGAGC AANTCCTTGA TGGTCACTAC GTCAAGGAAA CAGTAGTGGT AGATGGTCAG	6720
TTGACAAACA GTGCGGCTCC TTCAACAGCC CTTCGCTTTC CTTACGAGTT GGTGGAGCAA	6780
CTAGGAGGGG ACGCAGAGAG TTTACGAACA GGAATGCTCT ATCGAGATGT CTTTGGTAAA	6840
AATCAGTAAA ACGGGAGTTA TTCTCTCGTT TTTTATGTGG AAAACTCAGG GAAATCATCG	6900
CTTTTTTCAT AAAAAAATGC TATAATGAAG GGTATGAAAT ATCAGGATTA CATCTGGGAT	6960
TTAGTGGGAA CTTTACTGGA TAATTATGAA ACTTCAACAG CTGCATTNGT TGAACATTG	7020
GCACTGTATG GTATCACACA AGACCATGAC AGTGTCTATC AAGCTTTAAA GGTTCCTACT	7080
CCTTTTGCGA TTGAGACATT CGCTCCCAAT TTAGAGAATT TTTTAGAAAA GTACAAGGAA	7140
AATGAAGCCA GAGAGCTTGA ACACCGGATT TTATTTGAAG GAGTTTCTGA CCTATTGGAA	7200
GACATTTCAA ATCAAGGTGG CCGTCATTTT TTGCTCTCTC ATCGAAATGA TCAGGTTTGG	7260
GAAATTTTAG AAAAAACCTC TATAGCAGCT TATTTTACAG AAGTGGTGAC TTCTAGCTCA	7320
GGCTTTAAGA GAAAGCCAAA TCCCGAATCC ATGCTTTATT TAAGAGAAAA GTATCAGATT	7380
AGCTCTGGTC TTGTCATTGG TGATCGGCCG ATTGATATCG AAGCAGGTCA AGTCAGGA	7440
CTTGATACCC ACTTGTTTAC CAGTATCGTG AATTTAAGAC AAGTATTAGA CATATAAGAA	7500
AAAGGAATAA GATGACAGAA GAAATCAAAA ATCTGCAGGC ACAGGATTAT GATGCCAGTC	7560
AAATTCAGAT TTTAGAGGGC TTAGAGGCTG TTGATATGCG TCCAGGGATG TACATTGGAT	7620
CAACCTCAAA AGAAGGCTTT CACCATCTAG TCTGGGAAAT TGTGATAAC TCAATTGACG	7680
AGGCCTTGGC AGGATTGCCC AGCCATATTC AAGTTTTTAT TGAGCCAGAT GATTTCAGTA	7740
CTGTGTGGGA TGATGGGCGT GGTATCCCGAG TCGATATTCA GGAAAAACA GGCCGTCTCG	7800

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CTGTTGAGAC CGTCTTTACA GTCCCTTCAGC CTGGAGGAAA GTTCGGCGGT GGTGATACA	7860
AGGTTTCAGG TGGTCTTCAC GGGGTGGGGT CGTCAGTAGT TAATGCCCTT TCCACTCAAT	7920
TAGACGTTCA TGTTCACAAA AATGCTAAGA TTCAATACCA AGAATACCGT CGTGGTCATG	7980
TTGTGCGAGA TCTTGAAATA GTTGGAGATA CGGATAAMC AGGAACAAC TTTCACTTCA	8040
CACCGGACCC AAAAATCTTC ACTGAACAA CAATCTTTGA TTTTGATAAA TTAATAAAC	8100
GGATTCAGAA GTTGGCCCTT CTAAATCGCG GTCTTCAAAT TTCAATTACA GATAAGCGCC	8160
AAGGTTTGA ACAAAACCAAG CATTAATCATT ATGAAGGTGG GATTGCTAGT TACGTTGAAT	8220
ATATCAACGA GAACAGAGT GTAATCTTTG ATACACCAAT CTAATACAGC GGTGAGATGG	8280
ATGATATCAC AGTTGAGGTA GCCATGCAAT ACACAACCTGG TTACCAATGAA AATGTCATGA	8340
GTTCGCGCAA TAATATTCAT ACCCATGAAG GTGGAACACA TGAACAAGGT TTCCGTACAG	8400
CCTTGACAGC TGTATCAAC GATTATGCTC GTAAAAATAA GTTACTGAAA GACAATGAAG	8460
ATAATTTTAA AGGGAAGAT GTTCGCGAAG GCTTAACCTG AGTTATCTCA GTTAACACAC	8520
CAATCCACA GTTGAAGGA CAAACCAAGA CCAAAATTGG AAATAGCGAA GTGTCAGAA	8580
TTACCAATCG CCTCTTAGT GAAGCTTTCT CCGATTTCTT CATCGAAAT CCACAGATTG	8640
CCAACGTAT CGTAGAAAA GGAATTTTGG CTGCCAAGGC TCGTGTGCT GCCAAGCGTG	8700
CGCGTAGAGT CACACGTAAA AAATCTGGTT TGGAAATTTT CAACCTTCCA GGGAACTAG	8760
CAGACTGTTC TTCTAATAAC CTGCTGAAA CAGAACCTCT CATCGTCGAA GGAGACTCAG	8820
CTGGTGGATC AGCCAAATCT GTCGTAAAC GTGAATTTCA GGCTATCTCT CCAATTCGGG	8880
GTAAAGATTTT GAACGTTGAA AAGCAAGTA TGGATAAGAT TCTAGCCAAC GAAGAAATTC	8940
GTAGTCTTTT CACAGCCATG GGAACAGGAT TTGGCGCAGA ATTGTGATGT TCGAAAGCCC	9000
GTACCAAAA ACTCGTTTGT ATGACCGATG CCGATGTCGA TGGAGCCAC ATTCTATACC	9060
TTCTTTTAACT CTGATTTAT CGTTATATGA AACCATCTT AGAAGCTGGT TAATGTTATA	9120
TTGCCCAACC ACCAATCTAT GGTGTCAAGG TTGGAAGCGA GATTAAAGAA TATATCCAGC	9180
CGGGTCGAGA TCAAGAAATC AAATCCAAG AAGCTTTAGC CCGTTATAGT GAAGGTCGTA	9240
CCAAACCGAC TATTACAGCT TATAAGGGGC TAGGTGAATG GGACGATCAT CAGCTGTGGG	9300
AAACACCAT GGATCCCGAA CATCGCTTGA TGGCTAGAGT TTCTGTAGAT GATGTGCGAA	9360
AGCAGATAAA ATCTTTGATA TGTGTATGGG GATCGAGTTG TCCTCGTCG	9409

(2) INFORMATION FOR SEQ ID NO: 162:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 6415 base pairs  
 (B) TYPE: nucleic acid

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(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

CCTGGGAAAG TCTTGAAAT TATGATAGAA TGGTGGGAGG AAAAATTCAG GAGAGTAGTA	60
GTGACTCAAA ATGTTGAAAG TCTTCTCGTA TCCATTGTAA TCAGTGCATA CAATGAAGAA	120
AAATATCTGC CTGGTCTAAT TGAAGACTTA AAAAAACAAA CCTATCCTAA AGAGGATATT	180
GAAATTCAT TATATAATGC TATGTCACA GATGGGACCA CAGCTATCAT TCAGCAATTT	240
ATAAAGGAAG ATACAGAGTT TAACTCAAT AGATTGTATA ACAATCCTAA GAAAAATCAA	300
GCTAGTGGT TTAACCTGGG AGTTAAACAT TCTGTAGGGG ACCTTATTTT AAAAATTGAT	360
GCTCATTCAA AAGTTACTGA GACTTTGTGA ATGAACAATG TGGCTATTAT TCAACAAGGT	420
GAATTTGTCT GTGGGGGGCC TAGACCGACG ATTGTGGAAG GAAAAGGAAA ATGGGCGAGG	480
ACCTTGCACT TGTGTGAGGA AAATATGTTT GGCAGTAGCA TTGCCAATTA TCGAATAGT	540
TCTGAGGATA GATATGTTTC TTCTATTTTT CATGGAATGT ATAAACGAGA GGTTCCTCAG	600
AAGTTTGGT TAGTAAATGA GCAACTGGC CGAAGTGAAG ATAAATGATAT TCATTATAGA	660
ATTCGGAAT ATGGTTATAA AATCCGCTAT AGCCCAAGTA TTCTATCTTA TCAGTATATT	720
CGACCAACAT TCAAGAAAA GCTGCATCAA AAGTATTCAA ATGGTTGTG GATTGGCTTG	780
ACAAGTCATG TTCAGTTTAA GTGTTTATCA TTATTTCACT ATGTTCTCTG TTTATTTGTT	840
TTGAGTCTTG TGTTTAGTCT AGCATTTGTA CCGATCACAT TCGTATTCAT AACTTTACTA	900
TTAGGTGCCT ATTTCTACT TTTGTCAATTA CTCACTTTGC TGACITTTAT AAAACATAAA	960
AATGGATTC TAATTGTGAT GCCCTTTATT TTATTTTCCA TTCACTTTGC TTATGGCCTT	1020
GGGACGATTG TAGGTTAAT TAGAGGATT AAATGGAGA AGGAATACAA GAGAACATA	1080
ATTTATTGG ATAAAAAAG CCAAAATAAT CAAAATATGC TATATAACA ATATAGTAAA	1140
ACTCTTTAA GGAGAGTAG ATTTCTATGA ATAAAAAAT AACAGATTAT GTGATTGATC	1200
TGGTGGAAAT TTTAAATAAA CAACAAAAGC AGGTTTTCTG GGGAAATATT GATATTTTCA	1260
GTATGGTGT TTCCATCAT GTATCTTATA TTTTATTTA TGGGCTGATT AATCCAGCAC	1320
CTGTGACTA CATTATCTAT ACGAGTTTGG CCTTCTGT TATCAATTG ATGATTGGTT	1380
TTTGGGGTT GAACGCGAGC ATTAGTCGTT ACAGCAAGAT TACGGATTTC ATGAAAATCT	1440
TTTTTGGTGT GACTGCTAGC AGTGCTCTGT CATATAGTAT CTGTTATGCC TTCTTGCCAC	1500
TCTCTCCAT CCGTTTCATC ATTCTCTTA TCTTGTTGAG TACCTTCTTG ATTTTATTGC	1560



1050		
CACGGATTAC TTGGCAGTTA ATCTACTCCA GACGCAAAAA AGGTAGTGGT GATGGAGAAC	1620	
ACCGTCGGAC CTTCCTGATT GGTGCGGTG ATGCTGGGCG TCCTTTTATG GATAGTTTACC	1680	
AACATCCAAC CAGTGAATTA GAACGTGGTC GTATTTTGGT TAAAGGATCT AAGAAAAAGG	1740	
GTCAAAAACCT TGGTGGTATT CCGTTTGTGG GCTCTTATGA CAATCTGULT GAAATAGCCA	1800	
AACGCACTCA AATCGAGCGT GTCACTGGTG CGATTCCGTG GCTGGATCCG TCAGAAATATG	1860	
AGCCTATCTT GCAGATGTGT AATAAGCTGG GTGTCAAAATG TTACAAGATG CCTAAGGTTTG	1920	
AAACTGTTGT TCAGGGCCCT CACCAAGCAG GTACTGGCTT CCAAAAAATT GATATTACGG	1980	
ACCTTTTGGG TCGTCAGGAA ATCCGTCTTG ACGAATCGCG TCTGGGTGCA GAACTGACAG	2040	
GTAAGACCAT CTTAGTCACA GGAGCTGGAG GTTCAATCGG TTCTGAAATC TGTCTCAAG	2100	
TTAGTCGCTT CAATCCTGAA CGCATTGTCT TGCTCGGTCA TGGGAAAAAC TCAATCTACC	2160	
TTGTTTATCA TGAATTGATT CGTAAGTTCC AAGGAGTTGA TTATGTACCT GTGATGGCG	2220	
ACATTCAAGA CTATGATCTG TTGTGTCAGG TCTTTGAGCA GTACAAACCT GCTATTGTTT	2280	
ATCATGCGGC AGCCCAAG CATGTTCTTA TGATGGAGCG CAATCCAAAA GAGGCTTCA	2340	
AAAACAATAT CCGTGGAACT TACAATGTTG CTAAGGCTGT TGATGAAGCT AAAGTGCTCA	2400	
AGATGGTTAT GATTTCGACA GATAAGGCAG TCAATCCACC AATGTATG GGAGCAACCA	2460	
AGCGCGTGGC GGAGTTGATT GTCACTGGCT TTAACCAACG TAGCCAATCA ACCTACTGTG	2520	
CAGTTCGTTT TGGGAATGTT CTNGGTAGCC GTGTAGTGT CATCCAGTC TTTGAACGTC	2580	
AGATTGCTGA AGTGGGCGCT GTACGCTGA CAGACTCCG TATGACCCGT TACTTTATGA	2640	
CCATTCCAGA AGCTAGCCGT CTGGTTATCC ATGCTGGTGC TTATGCCAAA GATGGGGAAG	2700	
TCTTTATCCT TGATATGGGC AAACCACTCA AGATTTATGA CTGGGCCAAG AAGATGGTGC	2760	
TTCTAAGTGG CCACACTGAA AGTGAAATTC CAATCGTTGA AGTTGGAATC GCGCCAGGTG	2820	
AAAAACTCTA CGAAGAACTC TTGGTATCAA CCGAACTGT TGATAATCAA GTTATGGATA	2880	
AGATTTTCGT TGGTAAGGTT AATGTCAATG CTTAGAATC CATCAATCAA AAGATTGGAG	2940	
AGTTCGCGAC TCTCAGTGA GATGAGTTGA AGCAAGCTAT TATCGCCTTT GCTAATCAAA	3000	
CAACCCACAT TGAATAAAAA AGAAAAACGC ATAGTATCAA GTTACACACAC CTGCTGATTA	3060	
TGCGTTTAT TATGTAGAGA CTATACTCT CTGAAAAATCT CTTCAAACCA CGTCAACGTC	3120	
GCCTTGCCGT ATATGGTTAC TGACTCTGTC AGTTCTATCC ACAACCTCAA AACAGTGTTC	3180	
TGAGTGAAGT TCGTCAGTTC TATCCACAA CTCAAAACAG TGTPTTGAGC TGACTTCGTC	3240	
AGTTCTATCC ACAACCTCAA AACAGTGTTC TGAGCTGACT TGTGAGTTC CATCCACAAC	3300	
CTTAAAAACG TGTPTTGAGT TGACATTCGT CAGTTCCATC TACAACCTTA AACAGTGTTC	3360	

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TTGAGCTGCC CGCAGCTAGT TTCCTAGTTT GCTCTTGAT TTTCTATGAG TATTACTTCA	1420
TTTTCTTCTG AAATGGAATT GTTACCCAGT CTATGCTATT GAAATAAGC CAAAACCTCT	1480
AAGGGTTTGT GAGGATATA ATCAGGTTGA TAGTTTAGTA GATCTGCTTG CTCTCCAAAT	1540
CCCCAAGTGA TGGCCAATTT CTGAATACCT GTTTCTCGAG CTCCCAGCAT ATCAAACTTG	1600
GPATCTCCGA TGATGATGCG TTGTCTGGT GCTAGTTGAT GTGCTGCAA GCGTTGOTGA	1660
ATGACATCTG CCTTATGGGG TGCTTCAGGG CTAGAACCAT AAATGCCATC AAAGAAATGA	1720
TGGATTTCCTA AGTTTTTTGC CATGCTTTGA GCAGTAGATG TATCCTTTGT CGTGGTAGT	1780
TAGAGTGGAT AACTGCTCGA TAACTCCTCA AGCAAGTCTA TAATCTGAGG AAAGAGTTGA	1840
GCTTCATAGA TGCTTTTGC CTTATAGTAA GAACGATATA TCTGCACGGC TTCAGAAATT	1900
TGGTCTTTGG ACAGGCAGGT CGCAAACTA CTTTCGAGAG GTGGTCCCAT AAAACCAAGA	1960
ATAGTTTTGG CATCAGGGCT AGGCACCCCT AGCTCTTTAA AGGTATAGGT AAAGCATTG	4020
TGAATCCCGA TAGAACTATC AACGAGGGTT CCATCCAAAT CGAAAAAAT CGCTGTGATA	4080
GAGGTGATGG TTTCTCCTAT TTGATAAGCT TATTTCTCGA AAATTTCTTT TTGGAGGCGA	4140
CGACCACTAG GCGTGGTAGC GAGTCCACCT TCAGCTGTTT CACGAAAAGC AGTTGGCATG	4200
CTTGCTCTTA CTTGGTACAT GGCATCGATC ACTTCATCCA CAGGGATTTT AGATTGCGATA	4260
CCTGCCAAGG CCATGTCTGC TGCATGAAA GCAAGCTAG CTCCCATGGC ATTACGTTTG	4320
ACACAGGAAA CTTGACCAA ACCTGCAACA GGGTCACAGA TGAGGCCATG CATATTTTTA	4380
ATGACAAAAG CAATAGCTTG ACTGGCCTGA TAAGGTGTTT CACCTGCAGC CAGAGTCAAG	4440
GCGCAGCAC TCATAGCAGA GGTGAACCA ACTTCAGCTT GACACCCACC CTCAGCACCT	4500
GAGATGGAGG CATTGTTTGC GATGACTAGT CCAAAGGCAC CAGCAGCAA GAGGAAATCC	4560
AATTGTGCTT CGTGGCTGAG GTCTAAATTT TCAATAGCAG CAGTGAGAAC GGATGGCAGA	4620
CAGCCAGCAC TTCCAGCGGT TGGAGTGGCA CAGACCAAGC CCATTTTGGC ATTGTGTTCA	4680
TTGACTCGCA TGGCAITTCG GGCAGCGAG AGAATCGTAT AATCTGACAG AGTTTTCCTG	4740
TTTTTCATGT AGTGTACCAA TTTGGCAGCA TCTCCACCTG TCAGGCCACT ACGAGATTTA	4800
TTTTTCATGA GGCCAAGTTG GACAGAGGCT TTTCAACTT CCAGATTGCG TTCCATGAGA	4860
AAGAGAGCTT CTTCACTGTC GCGACCGGTC AATTCAAACT CTGTTGTAAAT CATGAGTTCT	4920
GCGACATTTT CTTGAAAATC CAGATCTGCT TGCTCGACCA ATTCTTTGAT AGAATAAAAC	4980
ATGCTTTCTC CTATTTAAAG AAATTCACAT TGTGGAGATG AGGGATTTTT CGAATTTCTT	5040
CGATAGCCTC ATCAGAGTTG CGACTGTCAA CTTGATAAAT CATAAATGGCT TTTTCACCAAG	5100

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CTTTTTCACG AGTGACATTC ATCTGGGCGA TATTGATACC ATAGCGGGAA AGCGCCTCTG	5160
TAACAAGGGC AATCATACCT GGAATATCTT GATGAACGAT GATGATAGTC GGTGTATTCA	5220
TATTGAGAGA GACGGCAAAA CCATTGAGTT CGGTACCTG AATATTTCCT CCACGATAG	5280
AAATACCAGT CAGCTGATG GTCTTGTTGG CATTFFAAC AGTAATPTTA GTGTGTATTG	5340
GGTGAGGGGC ATTGCTGTCT TTCTGAATGG TCCAGACAA CTGTGATACCA CGCTTGTTGG	5400
CAATTTCAG ACTATTGGA ATTTGAGGAT CATCTGTATC CATTCTCTAA ATACCTGCAA	5460
CAAGGGCTAG GTCTGTTCGG TGACCACGAT AGGTCTTGGC AAATGAGTTA AAAAGTTGGA	5520
ATTCAACTTC TGTCGAGTA TCATCAAAAA TGGAAGAGAC AATCTTCCCA ATACGAACAG	5580
CACCAGCGGT ATGGCTACTA GATGGGCCAA TCATAACTGG TCCGATGATA TCAAAGACAG	5640
ATTGAAAACG AAGTGATTTC ATCAGTTTCC CCTATAAAA ATTCTTATCT CTATTATATC	5700
AAGAAATGAG GGGCTTGGCT TTAATTTGGG ATGAAAACCT TTCTAATACC TCAAAATGCA	5760
TAAATATAGT ATCTTTTATG ACRAAAAAACA CCTTATTTAG GGAATATAAA AATAATTTTG	5820
TAAATTTCT ACATAAAAGT GTCAAGAAAC GGTAAATATT AAAGGGTAG ATAGAATAT	5880
AGAAAGAAGG AGAATTTTCG AATATGAAAT CAATAACTAA AAAGATTAAA GCAACTCTTG	5940
CAGGAGTAGC TGCTTGTGTT GCAGTATTTG CTCCATCATT TGTATCTGCT CAAGAATCAT	6000
CAACTTACAC TGTTAAAGAA GGTGATACAC TTTCAGAAAT CGCTGAAACT CACAACACAA	6060
CAGTTGAAAA ATTGGCAGAA AACAACCACA TTGATAACAT TCATTTGATT TATGTTGATC	6120
AAGGTTGGT TATCGATGCG CCGTAGCGC CTGTTGCAAC ACCAGCGCCA GCTACTTTAG	6180
CGGCACCAAGC CGCTCAAGAT GAAACTGTTT CAGCTCCAGT AGCAGAAACT CCAGTAGTAA	6240
GTGAAACAGT TGTTTCAACT GTAAGCGGAT CTGAAGCAGA AGCCAAAGAA TGGATCGCTC	6300
AAAAGAATC AGGTGGTAGT ATACAGCTAC AAATGACGCT TATATCGGAC GTTACCAATT	6360
AACAGATTCA TACCTGAAGC GTGACTACTC AGCTGAAAAA CAAGAACGGG TACCG	6415

(2) INFORMATION FOR SEQ ID NO: 163:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8494 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

TACCCCTTTC GAATTTTGGC AAAAAATCGG TAAGGCTTTG ATGGTAGTGA TCSCGGTTAT	60
GCCGGCTGCT GGTTTGATGA TTCAATCGG TAAGTCTATC GTGATGATTA ACCCAACCTT	120

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TGCACCACCTT	GTCAATCACAG	GTGGAAATFCT	TGAGCAAAATC	GGTTGGGGGG	TTATCGGTAA	180
CCTTCACATTT	TTGTTTGCCC	TAGCCATTGG	AGGAAGCTGG	GCTAAAGAAC	GTGCTGGTGG	240
TGCTTTGGCC	GCTGGTCTTG	CCTTCATCTT	GATTAACCGT	ATCACTGGTA	CAATCTTTGG	300
TGTATCAGGC	GATATGTTGA	AAAATCCAGA	TGCTATGGTA	ACTACTTTCT	TTGGTGGTTC	360
AATCAAAAGTT	GCTGATTAAT	TTATCAGTGT	TCTTGAAGCT	CCAGCCTTGA	ACATGGGGGT	420
ATTGATAGGG	ATTATCTCAG	GTTTGTAGG	GGCAACTGCT	TACAACAAAT	ACTCAACTT	480
CGGTAAACTT	CCTGATGCAC	TTTCATTCCT	CAACGGGAAA	CGTTTCGTAC	CATTTGTAGT	540
TATTTCTCGT	TCAGCAATCG	CTGCAATCT	ACTTGCTGCT	TTCTGGCCAG	TAGTTCAAAC	600
AGGTATCAAT	AACCTTGGTA	TCTGGATTGC	CAACTCACAA	GAAACTGCTC	CAATTTCTTC	660
ACCATTTCTTG	TATGTTACTT	TGGAACGTTT	GCTCTTGCCA	TTTGGTCTTC	ACCACATGTT	720
GACTATCCCA	ATGAATACA	CAGCTCTTGG	TGGTACTTAT	GACATTTTAA	CTGGTGCAGC	780
TAAAGGTACT	CAAGTATTCG	GTCAAGACCC	ACTATGGCTT	GCAATGGTAA	CAGACCTTGT	840
AAACCTTAAA	GGTACTGATG	CTAGTCAATA	TCAACACTTG	TTAGATACAG	TACATCCAGC	900
TCGTTTCAAA	GTGGACAAA	TGATCGGTTT	ATTCTGATAT	TTGATGGGTG	TGATTTGTC	960
TATCTACCGT	AATGTTGATG	CTGACAAGAA	ACATAAATAC	AAAGGTATGA	TGATTCOAAC	1020
AGCTCTTGCA	ACATTTCTTG	CAGGGGTTAC	TGAACCAATC	GAATACATGT	TCATGTTTCAT	1080
CGCAACACCT	ATGATCTCTG	TTTACTCACT	TGTTCAAGGT	GCTGCCTTCG	CTATGGCTGA	1140
CGTCGTAAAC	CTACGTATGC	ACTCATTCGG	TTCAATCGAG	TTCTTGACTC	GTACACCTAT	1200
TGCAATCAGT	GCTGGTATTT	GTATGGATAT	CGTTAATCTC	GTTTGGGTAA	CTGTTCTCTT	1260
TGCTGTAAAT	ATGTAATTTA	TCGCAAACTT	CATGATTCAA	AAATTCACAT	ACGCAACTCC	1320
AGGGCGCAAC	GGAAATACG	AACTGCTGA	AGGTTCAAGAA	GAAACGAGCA	GCGAAGTGAA	1380
AGTTGCAGCA	GCGTCTCAAG	CTGTAAACAT	TATCAACCTT	CTTGGTGGAC	GTGTAAACAT	1440
CGTTGATGTT	GATGCATGTA	TGACTCCTCT	TCGTGTAAT	GTTAAGATG	CAGATAAAGT	1500
AGGAATGCA	GAGCAATGGA	AAGCAGAAAG	AGCTATGGGT	CTTGTATGGA	AAGGACAAAG	1560
GCTTCAAGCT	ATCTACGGTC	CAAAAGCTGA	CATTTTGAAA	TCTGATATCC	AGATATCCCT	1620
TGATTCAGGT	GAAATCATTC	CTGAAACTCT	TCCAAGCCAA	ATGACTTGAG	CACAACAAAA	1680
CACGTGTCAC	TTCAAGATC	TTACTGAGGA	AGTTTACTCA	GTAGCAGAGC	GTCAAGTTGT	1740
TGCTTTGGAA	CAAGTAAAG	ATCCAATATT	TGCTCAAAAA	ATGATGGGTG	ATGGATTTGC	1800
AGTAGAACCT	GCAAAATGAA	ACATTGTATC	TCCAGTTTCA	GGTACTGTGT	CAAGCATCTT	1860

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CCCAACAAA CATGCTTTTG GTATTGTGAC GGAAGCAGGT CTTGAAGTAT TGGTTACAT	1920
TGGTTGTGAC ACAGTAAGTC TTGAAGTAA ACCATTACAT GTTCATGTTG CTGAAGGACA	1980
AAAAGTTGCA GCAGGAGATC TCCTTGTCAC AGCTGACTTG GATGCTATCC GTGCAGCAGG	2040
ACGTGAAGCT TCAACAGTAG TTGTCTTCAC AAATGGTGAT GCAATTAAAT CAGTTAAGTT	2100
AGAAAAGACA GGTTCCTCTG CAGCTAAAC AGCAGTTGCT AAAGTAGAAT TGTAAATATAC	2160
TTGAGGTTGG AAGCTGTATT CCACCTCTTT ATTTTGGGAG AAAAGAATGA AATTTTAAAC	2220
ACTCAATACT CACAGTTGGA TGGAGAAAGA AGCAGAGGAA AAATCCAGA TTTTGCTTGA	2280
AGATATTCTT GAAAGGACT ATGATTGTAT TTGTTTTCAT GAAATCAATC AGGAGATGAC	2340
CTCGTCAGAG GTGGAGGTTA ATGACCTTTA TCAAGCTTTG CCAGCAGCTG AGCCTATTCA	2400
CCAAGACCAT TATGTTAGAC TCTTGGTTGA AAAGTTGTCT GAGCAAGGGA AAAATTACTA	2460
CTGGACCTGG GCCTATAACC ATATCGGCTA TAACCGCTAC CACGAAGGTG TGGCTATCTT	2520
GTCTAAACA CCTATTGAAG CCAGAGAAAT TTTGGTTTCA GATGTGGATG ATCCAACAGA	2580
CTATCATACT CGCCGTGTTG CCTAGCTGA AACTGTAGTC GATGGCAAGG AGCTAGCAGT	2640
TGCCAGTGTT CATCTCTCTT GGTGGGATAA AGGTTTCCAA GAAGAATGGG CACGATTTGA	2700
GGCTGTCTTG AAAAAATTGA ACAAGCCACT TTTACTAGCT GGAGATTTCA ACAATCCGGC	2760
TGGACAGGAA GGTACCAAG CTATTTTAGC TAGTCCATTA GGCTTACAAG ACGCATTTGA	2820
AGTTGCTCAA GAGAAAAGTG GTAGCTATAC TGTTCGGCTT GAAATTGATG GCTGGAAGG	2880
GAACTACTGA CCCCTTCGAA TCGATTATGT CTTTACTACC AAAGAGTTAG CGGTGGAAAA	2940
TTTACATGTC GTATTGTATG GTAAACAAGG TCCACAAGTG AGTGATCACT ATGGCTTGAA	3000
TGCTATATTA AACTGGAATAT AATAACTGAA AAGAGGTTGG AACTATAAAA TTCCAGCCTT	3060
TTCTTACTAG AGAAGCTACT GGAAATAGCC TAAATAAGTG AGACTACTGT AATGGAATAA	3120
AATATGGTAT AATTGATAAG GTAGATAGAA TCGAGGATGT TATGTCATTT ACGAAATTTT	3180
AATTTAAAAA CTATATTAGA GAAGCCTTGA AGGAGTTAAA ATTTACAACCT CCAACAGAGG	3240
TGCAAGACAA GTTGTATCCT ATTGTTTTGG CAGGTCGTGA CCTAGTAGGA GAATCAAAAA	3300
CAGGTTCAAG TAAGACTCAT ACTTTCTTGT TACCGATTTT CCAGCAATTA GATGAAGCTA	3360
GCATAGTGT ACAAGCAGTG ATTAATGACAC CGAGTCGTGA GTTGCTACTT CAAATTTAGC	3420
AAGTAGCGCG TCAGATTCCA GCTCACTCAG ATGTGCAAGT TCGTGTGGTT AATTATGTGG	3480
GTGGTACGGA TAAGGCTCGC CAGATTGAGA AATTGGCAAG CAATCAGCCT CATATTGTTA	3540
TTGGAACACC AGGCCGTATC TACGACTTGG TTAATCTGG TGATTAGCTT ATTCATAAAG	3600
CCAAGACATT TGTGTGTGAT GAAGCAGATA TGACCTTGA TATGGGATTC TTGGAATCTG	3660

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TTGATAAGAT	TGCTGSCAGT	CTTCCAAAAG	ACTTGCAATT	CATGCTCTTC	TCAGCGACTA	3720
TCCCAACAAA	ACTGCAACCA	TTCTTGAAAA	AATACTTATC	AAATCCTGTT	ATGGAGAAAA	3780
TTAAGACCAA	AACGGTTATT	TCTGACACCA	TTGATAATTG	GTTGATTTGG	ACCAAGGGAC	3840
ATGATAAGAA	TGCTCAAAAT	TACCAGTTGA	CTCAGTTGAT	GCAGCCGTAT	TTGGCAATGA	3900
TTTTTGTATA	CACATAAACG	CGTGCTGATG	AATTGCATTG	ATATCTGACT	GCTCAAGGCT	3960
TGAAGGTTGC	AAAAATCCAT	GGCGATATTG	CCCTCGTGA	ACGCAAGCGA	ATCATGAATC	4020
AGGTGCAAAA	TCTGGATTTT	GAGTATATTG	TCGCAACAGA	TTTGGCAGCG	CGTGGGATTG	4080
ACATTTGAAG	TGTCAGCCAT	GTCACTCAATG	ATGCCATTCC	GCAAGACTTA	TCTTTTTTTG	4140
TTTCATCGTT	TGGTCTGACT	GGACGAAATG	GCTTACCAGG	TACAGCTATT	ACCTTTTATC	4200
AGCCAAGTGA	TGACTCGGAT	ATCGGTGAGT	TGGAGAAATT	GGGAATCAAG	TTTAGTCTTA	4260
AGATGGTCAA	AGACGGGGAA	TTTCAAGATA	CCTATGACCG	TGATCGTCTG	GCCAAACGTG	4320
AGAAAAAACA	AGATAAACTT	GATATCGAAA	TGATTGGTTT	GGTTAAAAAG	AAAAAGAAAA	4380
AAGTCAAAAC	GGGTATAAAG	AAGAAAAATC	AATGGGCGGT	TGATGAAAAA	GGCGGTAAAA	4440
CCAGCGCTGC	TGAAAAATCG	GCTCGCGGTC	GTGCAGAGCG	TAAAGCTAAA	GGCCAAACAT	4500
TTTAATAGAA	ATTGTTGGAG	TATTGAGCTC	CAACTTTTTT	ATTTATGAGA	ACGAACATAT	4560
TAAACCGAAA	CACATACATTA	AAGACTGCAA	ATTGCGATTA	AAAAATGGTAT	AATGATAAAG	4620
TTATATAGTC	CCGATAAGAT	GGTAGGTATT	TATTAAGGAG	AGTTTTCTTA	TCAGTACTTT	4680
GTAACCTCTAT	AACAATATTT	TTTAAGGGGG	GACATTTTTA	TGTCAGAGCG	TAAATTTATC	4740
ACGCTCGAAT	CTGTATCTGA	GGGGCATCCG	GATAAGATTG	CAGACCAAAAT	TTGAGATGGG	4800
ATTTTGAGTG	CTATTTTAGC	AAAGGATCCA	GAGGCGCAGG	TTGCTGCTGA	AACAGCTGTA	4860
TATACCTGGTT	CTGTCCACGT	TTTTGGTGAA	ATTTCTACAA	ATGCCATATG	GGATATTAAAC	4920
CGTGTGGTTC	GTGATACCAT	TGCAGAGATT	GGTTATACCA	ATACAGAATA	TGGATTTTCT	4980
GCTGAAGACGG	TGGGAGTACA	CCCATCTTTG	GTGGAACAAAT	CTCCTGACAT	CGCTCAAGGT	5040
GTTPAACGAAG	CCTTGGAGGT	TGTTGGAAAT	GCTGATCAAG	ATCCACTGGA	CTTGATTGGA	5100
GCAGGTGACC	AAGGGCTCAT	GTTTGGATTT	GCAGTAGATG	AAACAGAAGA	GCTTTATGCCA	5160
TTGCCAAATTG	CACATCACTGA	TAAATTGGTT	CGTCTCTGCG	CAGAACTTCG	TAAATCTGGA	5220
GAAATTAGCT	ATCTCCGTCC	AGATGCAAAA	TCACAAGTTA	CAGTTGAGTA	CGATGAAAAAT	5280
GACCGTCCGG	TACGCTGAGA	TACAGTCGTT	ATTTCTACTC	AGCATGATCC	AGAGGCCACT	5340
AATCAACAAA	TCCATCAAGA	TGTGATTGAC	AAGGTATCAT	AAGAAGTTAT	TCCATCTTCT	5400

1056

TATCTTGATG ATAAGACAAA ATCTTTTATC AATCCGACAG GTCGTTTGT AATCGTGGT	5460
CCCTCAAGGG ACTCAGGTTT GACTGGTCGT AAGATTATTG TAGATACTTA TGGTGGCTAC	5520
TCCTGTCATG GTGGTGTCCT CTCTCTGGT AAAGATGCGA CTAAGTGGTA TCGTTCAGCC	5580
TCTTATGCGG CTCCTATAT TGCCAAGAA ATCGTTGCGA CAGACCTTGC TAAGAAGGCA	5640
GAAGTGCAGT TGGCTATGC TATCGGTGTT GCGCAACCTG TTCTGTGTG TATCGATACT	5700
TTGCGTACAG GAACAGTAGC TGAAGTCAA CTTGAAAAAG CGGCTCGTCA AATCTTTGAC	5760
CTTCCGCTCG CAGGGAATTAT CCAAAATGCTG GACCTCAGCG GTCCAATTTA CCGTCAAAACA	5820
TGCGCTTACG GTCACATGGG ACGTACAGAT ATTGATCTTC CATGGGAAG TTTGGAATAG	5880
GTAGATGCTT TGAAGAAGC AGTAAATTA GATTTTAAGA GXXGAACGTC CTCTCTTTT	5940
TATAGTTTTT AACTATACTG GGATACTGTT CTGAAATCC ATTTTGCAG AAAGTAGAGAT	6000
TACATGTATA GTAGATTGAA ACTGAATAG TACACCTCAA CTCTTAAAC ATTGTTAGCA	6060
ATCAATTTGA CTGTCCGTAT CGATTCTCC TGTCTTGTG TCATTTTACT ATATTCTTT	6120
AAAAATGATA AAGGTTAAGA TTCTCCTCG TAATAGATA TCTTGGGAT ATTTCAATCC	6180
AAAGTTTTAT TCGTTATCAC TTGACTATTG CAAGGTTTTG TAGAGCAACA GAGTCATGGA	6240
ATGACTCAT GGTGAGATT TCTCTTGTG GCTTGGACTT CATTCAAAAG TCTGTTACCC	6300
AAGCCTTGTT CAACTTCTA ATACACTAGC TGTPTCCATA GCATGACTTC TGTACTAGAC	6360
TTTCTTTTCC GAATAAATAG ATAGAACCAC AGAATCTAGT AAACCTAGAA TTAAATTAAT	6420
GGTATAATAT TAGCAATAA AGAAATCTGG AGGATTAGAA TCATGGTATC AACGAAAAACA	6480
CAAAATTGCTG GTTTTGAAGT TGACAATTGC TTGATGAATG CAGCAGTGT GGCTTGATAG	6540
ACGATAGAGG AGTTAGAAGA GGTCAAAAAC TCAGCGCGAG GAACCTTTGT TACTAAGACA	6600
GCGACCTTGG ACTTCCGTCA GGGGAATCCT GAGCCACGCT ACCAAGATGT TCCACTTGGT	6660
TCATCAACT CTATGGGCTT GCCAAATAAT GGCTTAGACT ATTATTGGA TTATCTTTTA	6720
GATTTGCAGG AAAAAGAGTC GAACCGAACT TTCTCTTAT CTCTGGTCGG CATGTCCTCA	6780
GAGGAACCC ATACTATTTT GAAAAAAGTC CAAGAGAGTG ATTTTGTGG TCTGACTGAG	6840
CTAAATCTTT CCTGTCCAAA TGTTCCAGGT AAACCTCAGA TTGCTATGA TTTTGAGACA	6900
ACAGACCCGA TTTTGGCAGA AGTGTTTGCT TACTTACCA AACCTCTGG AATTAAATGT	6960
CCACCTTATT TTGATATTGT TCACTTTGAC CAGCGCGAG CTATPTTCAA CAAATATCCG	7020
CTCAAGTTTG TCAACTGCGT TAACTCTATC GGAAACGGCC TCTATATAGA AGACGAATCT	7080
GTGTTTATTC GGCTTAAGAA TGGTTTGGT GGAATTGGT GAGAATACAT CAAACCGACT	7140
GCTTTAGCCA ATGTTTACGC CTTTATCAA CGTTTAAATC CTCAATCCA AATTATCGGA	7200

1057

ACAGGTGGCG TTCTGACTGG TCGAGATGCC TTTCGAACACA TCCTCTGTGG AGCAAGTATG 7260  
 GTGCAGGTGG GAACGACCCCT TCACAAAGAA GGCGTCACTG CTTTGTACCG CATTACCAAT 7320  
 GAACCTGAAAG CAATCATGGT GGAATAAGGC TACGAGAGCT TAGAAGATTT CCGTGGGAAA 7380  
 TTGCGCTATA TTGACTAAAT TAAATCGAAA AATCTGAAGA AAGGAGAGAC GATGCTAGCC 7440  
 ATTGAGAAA GTGAGAAGTT GACTTTATCA AATTTACCGA GCCTGAGCCT ATTTACAGGG 7500  
 ACAGATCAGG GTCAAGTTGA AGTGATGAAG AGTCAAATGT TGAAACAGAT TGGGTATGAT 7560  
 TCTGCTGACC TCAACTTTGC CTACTTTGAT ATGAAGAAG TAGTTTACAA GGATGTGAA 7620  
 CTGGAGTTGG TCAGCCTTCC TTCTTTGGG GATGAGAAA TCGTGATATT AGATTATTTT 7680  
 ATGGATATCA GACTGTCTAA GAAACGCTTT TTGACAGATG ATGAGCTTAA GTCATTGAG 7740  
 GAATACCTTG ACAATCCTTC TCCAACAACC AAGTTGATAA TCTTTGAGA AGGAAAGCTG 7800  
 GATAGCAAAA GACGGTTAGT CAAATTACTT AAGCGTGATG CCAAGGCTT CGATGCAGTA 7860  
 GAAGTAAAGG AACAGAATT GCGCCAGTAC TTCCAAAAGT GGAGTCAGAA ACAAGGCTCTG 7920  
 CAGTTTACCA ATCATTCTTT TGAATACTC CTCATCAAGT CGGGGTTTCA ATTTAGCGAA 7980  
 ATCCAGAAAA ATCTTCTCTT TTTACAGTCC TATAAGGCGA ATTCTGTTAT TGAGGAAGAG 8040  
 GATATTGTTA ACGCAATTCC CAAGACTTGC AGGACAATAT TTTTGATTTA ACTCAGTTTA 8100  
 TTCTGACTAA AAAGATGGAT CAGGCGCGCG ATTTGGTGAG AGACTTGACC TTGCAAGGGG 8160  
 AAGATGAAAT CAAACTGATT GCAGTCATGC TGGGACAATT TCGGACTTTT ACTCAGGTGA 8220  
 AGATTTTGGC GGAGTCTGGC CAAACAGAAAT CGCAGATTGC AAGTAGTTTA GGTAGTTATC 8280  
 TGGGACGTAA CCCAAATCCT TATCAAAATCA AGTTTGCAAT AAGAGATTCC AGAGGACTTT 8340  
 CTTTAGGCTT TTGAAGCAA GCTATTTCCT ATTTGATTGA GACAGACTAT CAGATTAAAG 8400  
 CAGGTCPTTA TGAATAAGGT TTCTTTTGGT AAAAGGCACCT CTTACAGATT GCTAGTCAGG 8460  
 TCAATTGACA TTTGTTGAAA CTACTAACCC GCGG 8494

(2) INFORMATION FOR SEQ ID NO: 164:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 9707 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

CCGGTCAGTT CGTTCAGTAC AAGGAATCAT AATGAACGAT CAATCAGAAA AAAAGACTAG 60



1058

AAAGAGACT GTATGGATAA TCGACCAATT GGTTTTTTGG ATTCGGGTCT CGGGGGCTTG	120
ACCGTTGTGC GCGAGCTCAT GCGCCAGCTT CCCCATGAAG AAATCGTCTA TATTGGAGAT	180
TCGGCGCGGG CGCCCTATGG CCCCCTCCT GCTGAGCAAA TTCTGGAATA TACTTGGCAG	240
CTGGTCAACF TTCTCTTGAC CAAGGATGTC AAATGATTG TCATTTGCTTG TAACACTGCG	300
ACTGGGTCG TCTGGGAAGA AATCAAAGCT CAACTAGATA TTCTGTCTTT GGGTGTAAAT	360
TTGCCAGAGG CTTGCGCAGC CATCAAGTCC AGTCAAGGTG GGAAATCGG AGTGATTGGA	420
ACGCCCATGA CGGTACAATC AGACATATAC CGTCAGAAAA TCCATGATCT GGATCCCGAC	480
TTACAGGTGG AGAGCTTGGC CTGTCCCAG TTTGTCCCT TGGTTGAGTC AGCTGCCCTG	540
TCACACCATG TTACCAAGAA GGTGGTCTAT GAAACCTGCG GTCCCTTGGT TGGAAAGGTG	600
GATAGCCTGA TTTTGGGCTG TACTCATTAT CCATCCCTTC GCCCTATTAT CCAAAATGTG	660
ATGGGGCCAA AGGTTCACTC CATCGTAGT GGGGCAGAGT GGTACGGGA TATCTCAGTC	720
TTACTCAATT ATTTTGAAT CAATCGTGGT CGCGATGCTG GACCACTCCA TCACCGTTTT	780
TACACACAG CCAGTAGCCA AAGTTTTGCA CAJAATTGTTG AAGAATGCTT GGAAGAAAGAG	840
ATTCATGTGG AGCATGTAGA ATTATGACAA ATAAAAATTA TGAATATAAG GATGACCAGG	900
ACTGGTATGT TGGGTCTTAT AGTAATTTTG GTGGCGTTAA CAGTTTGAGC GACTATAAGA	960
CAGATTTTCC TCTGTTTGA TTTCTCAAAA TATTTGAGGA TGAAGAGTAT GGTTTCCCGC	1020
TTTCAGTTAC TGTTTTACGC TATGGTTCTA TCTACCGTTT GTTCTCCTTT GTGTAGACA	1080
TGCTTAATCA AGAAATGGGA CGAAACTTGG AAGTTATTCA ACGTCATGGG GCCCTGCTCT	1140
TGTTTGAATA TGGGCAACTC TTGTATGTAG AATTGCTTAA AGAAGGGGTC AATGTTCAATG	1200
ATTTCTTTGA GACAAGCAAG GTCAGAGAAA CCTTGTGTAT TGCGACTCCT AACGAAGGTA	1260
AAACCAAGGA ATTCCGAGCT ATCTTTGATA AGTTAGGCTA CGATGTGGAA AATCTTAATG	1320
ACTAGCCCTGA CCTGCCTGAA GTAGCAGAAA CAGGTATGAC CTTTGAAGAA AATGCCCGCC	1380
TTAAGGCAGA AACCATTCTT CAATTAAACGG GCAAGATGGT TTTGGCAGAT GATTCTGGTC	1440
TCAAAGTCGA TGTCTTGGT GGCTTACCAG GCGTCTGCTC AGCTCGTTTC GCAGGTGTGG	1500
GAGCAACTGA CCGTGAJAAT AATGCCAACC TCTTGCACGA ATTTGGCAGT GTCTTTGAAC	1560
TCAGGACCG CTCGGCTCAG TTCCACACAA CCTAGTCGT AGCCAGCCCA AATAAGGAAA	1620
GTTTAGTTGT TGAAGCAGAG TGCTCAGGTT ATATTAACTT TGAACCTAAG GGTGAJAATG	1680
GCTTTGGCTA TGATCCCTTC TTCTTGTAG GAGAAACAGG TGAGTCATCA GCTGAATTAA	1740
CCCTGGAAGA AAAAAATAGT CAATCTCACC GTGCCCTTAGC CGTTAAGAAA CTTTTGGAGG	1800
TATTTCCATC ATGGCAAGAC AAACCATCAT TGTAAAGAG GATTCCCATG GCGATAGCTT	1860

GATTGTGGAA	GAAGTCOSIG	ATCGCTATGT	GGCCAAAGTC	GATGCTGTTT	TTCATAACGG	1920
CGATTCTGAA	CTACGTCCGG	ATCTCCACT	TTGGGAGGGC	ATCCGCGTTG	TTAAAGGGAA	1980
CATGGACTTC	TACGCCGGCT	ACCCAGAACG	TCTGGTGACT	GAGCTTGGTT	CGACCAAGAT	2040
TATCCAAACT	CATGCTCACT	TGTTTGACAT	CAATTTCALC	TTTCAAAGT	TGGACTACTG	2100
GGCTCAGAG	GAAGAGCCG	CTATCTGCCT	CTATGCTCAC	TTGCATGTGC	CAAGTGCCTG	2160
GTTGGAAGGC	AAGATCCTCT	TTCTAAATCC	AGGTCTTATC	AGTCAACCAC	GAGGTACCAT	2220
CAGAGAATGT	CTCTATGCTC	GTGTGGAGAT	TGATGATAGT	TACTTCAAAG	TGGACTTTTT	2280
GACACGAGAT	CACGAGGTGT	ATCCAGGTTT	GTCCAAGGAG	TTTAGCCGAT	GATTGCCAAG	2340
GAGTTTGAGA	CTTCTCTGTT	GGGCGAGGAG	GAACCTTTTT	TGACCCCTGC	TAAAAATCTA	2400
GCTGTGTGGA	TTGATACCCA	CAATGCGGAT	CATGCGACCC	TCTTGCTCAG	TCAGATGACC	2460
TATACCCGTG	TTCCCGTTGT	GACAGATGAA	AAACAOTTTG	TTGGGACGAT	TGGACTCAGA	2520
GATATTATGG	CTTATCAGAT	GGACCATGAC	TTGAGCCAA	AAATCATGTC	GGATACGGAT	2580
ATCGTTCATA	TGACAAAAAC	GGACGTAGCG	GTTCTTTCCG	CTGATTTTAC	CATTACGGAG	2640
GTCTTCGACA	AGCTAGTAGA	TGAGTCTTTC	TTACCGGTTG	TGGATGCAGA	GGGTATTTTC	2700
CAAGGGATTA	TTACGCGCAA	GTCCATCTCT	AAGGCCGTTA	ATGCCCTCTT	GCATGACTTT	2760
AGTAAGGAAT	ATGAGATTCG	ATGCCAATGA	GAGACAGGAT	TTGAGGAGAA	TTAGAGGAAA	2820
AGCAGGGCTT	GTCTGTCAAT	TCCAAGCAGT	CCTATAAGTA	TGATTTGGAG	CAATTTTTAG	2880
ACATGGTAGG	TGAGCGGATT	TCTGAGACCA	GTCTCAAGAT	TTACCAAGCC	CAGCTAGCCA	2940
ATCTAAAAAT	CAGCGCCCG	AAGCGAAAGA	TTTCGGCCTG	TAACCAATTT	CTATACTTTC	3000
TCTATCAAAA	AGGAGAGGTT	GACAGCTTTT	ACCCTCTTGA	ATTAGCCAAA	CAAGTGAAA	3060
AGAAGACGGA	AAAGCCAGAG	ATCTATATAC	TAGACTCTTTT	TGGCAGGAA	AGCGACCATC	3120
CAGAGGGCCG	CTTCCTAGCG	CTCTTAATCC	TAGAAATGGG	GCTCTTGCCC	AGTGAGATTT	3180
TAGCCATCAA	GGTTGCGGAC	ATCAATCTGG	NTTTTCAGGT	TTTGGGAATC	AGCAAGGCTT	3240
CCCAACAGAG	GATTGTCAAC	ATTCCCAACG	CCTTGCTTTT	AGAATTGGAA	CCCTTGATGG	3300
GGCAGACCTA	TCTTTTTGAA	AGAGGAGAGA	AACCTTATTC	TCTGTCAGTG	GCCTTTGCTC	3360
AGTTAGAAAT	TTTTGTCAAG	GAGAAAGGTT	TTCCATCTCT	ATCAGCTCAA	GTCTTACGTG	3420
AACAGTTTAT	TCTAAGACAA	ATAGAAAACA	AGGTCGATTT	GTACGRAATT	GCAAAAAAAT	3480
TAGGATTTAA	AACAGTCTCT	ACCTTAGAAA	AAATATAGATA	ATGGATATTA	AATTTAAAGA	3540
TTTTGAAGGA	CCCTTGAGCT	TGCTCTTGCA	TCTGGTTTCT	AAGTACCAGA	TGGATATCTA	3600

1060		
CGATGTGCCC ATTACGGAAG TCATCGAACA GTATCTAGCC TATGTCCTCAA CCTTCGACGC	3660	
CATCGTCCTG GAAGTGACGG GTGAGTACAT GGTTCATGGCT AGTCAGCTCA TGCTGATTAA	3720	
GAGTCGTAAA CTCCTCCCA AGGTAGCAGA AGTCAGACAG TTGGGGGATG ACCTGGAGCA	3780	
GGACCTCTCT TCTCAANTCG AAGAATATCG CAAGTTCGAAG CTCCTGGGTG AGCACTTGGA	3840	
AGCCAAGCAC CAAGAAGCGG CCCAGTATTA TTCCAAAGCG CCGACAGAGT TGATTTACGA	3900	
AGATCGCGAG CTTGTGCATG ACAAGACGAC CATTGACCTC TTTTGTGACTT TTTCAAAATAT	3960	
CCTAGCCNAG AAAAAGAGGG AGTTTGACACA AAATCACACG ACGATCTTGC GGGATGAGTA	4020	
TAAGATTGAG GACATGATGA TTATCOTGAA AGATCTCTTG ATTGGACGAG ATCAATTGCG	4080	
CTTGCAGGAT TTGTTCAAGG AAGCCGAGAA TGTCCAAGAG GTATCAACCC TCTTTTGGC	4140	
AACCCTAGAG TTAATCAAAA CCCAGGAGTT GATCCTCGTG CAAGAGGAGA GPTTTGGAGA	4200	
TATCTATCTC ATGGAAGAGA AGGAAGAAAG TCAAGTGCCCT CAAAGCTAGA CTTGATAGAG	4260	
AGGAAGATG AGTACTTTAG CAJAAATAGA AGCGCTCTTG TTTGTAGCGG GTGAAGATGG	4320	
GATTGCGGTC CGCCAGTTAG CTGAATCCTT CTCTCTGCA CCGACAGGCA TCCAGCAAAG	4380	
TTTAGGAAAA TTAGCCCGAGA AGTATGAJAA GGACCCAGAT TCCAGTTTGG CTTTGAATTGA	4440	
GACAAAGTGT GCTTATAGAT TGGTGACCAA GCCTCAATTT GCAGAGATTT TGAAGGAATA	4500	
CTCTAAGGCG CCTATCAACC AGAGCTTGTC TCGGGCTGCC CTGAGACCT TGTUCATTAT	4560	
TGCTCAAAA CAGCCGATTA CGCGATAGA AATTGATGCC ATCCGGTGGG TTAACTCGAG	4620	
TGGAGCCTTG GCAAAGTTGC AGGCTTTTGA CCTGATAAG AAGAGCGGA AAAAGGAAGT	4680	
ATTGGGGCCG CCCAACCTCT ATGTGACTAC GGATTAATTC CTAGATTACA TGGGGATAAA	4740	
CAATTTAGAA GAATTACCAG TGATTGATGA GCTTGAGATT CAAGCCCAAG AAAGCCAATT	4800	
ATTTGGTGAA AGGATAGAA AGATAGAGAA TCAATAAGTA TATTGCCAC GCAGGTGTGG	4860	
CCAGTAGGAG AAAAGCGAA GAGCTGATTA AGCAAGGCTT GGTGACGGTT AACGCCAAG	4920	
TGGTCGTGA ACTAGCAACC ACTATCAAGT CAGGCACAA GGTCGAAGTT GAAGGTCAAC	4980	
CTATCTACAA CGAAGAAAAG GTCTACTATC TGCTTAACAA ACCACGGGT GTGATTTCCA	5040	
GTGTGACAGA TGATAAGGOT CGCAAGACGG TTGTGACCTT TGTGCCCAAT GTCAAGAGC	5100	
GTATTATCAC TGTGGGTGCT TTGGAAGGG ATACATCAGG TGCTCTGATT TTGACCAAGT	5160	
ATGGGAGCTT TACAGACGAG ATGATTACCC CTCGTATAGA GATTGACAGG GTTATATGTCG	5220	
CGCOTGTAA AGGTGTGGCC AATAAGGACA ATCTCCGCC CTTGACCCGT GGTCTTGAGA	5280	
TTGATGTTAA GAAAACCAAG CCAGCTGTTT ATGAATTTCT CAAAGTGAC CCAATCAAAA	5340	
ATCGCTCTGT GGTGCAAGTG ACCATCCATG AAGGGGTAA CCATCAGGTT AAAAAGATGT	5400	

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TTGAAGCTGT TGGTCTCCAA GTAGATAAGT TGTCTCGGAC TCGTTCCGA CACCTAGACT	5460
TGACAGGACT CCGTCCAGGA GAATCCCGTC GTCTTAATAA AAAAGAAATC AGCCAACCTAC	5520
ACACCATGCG TGTAACTAAG AAATAATGAA ACGAATTTTA ATAGCGCCTG TCGCTTTTFA	5580
CCAACGTTTT ATCTCACCAG TCTTTCCACC CTCTTGTCOC TTTGAGCTGA CTTGTCCAA	5640
CTACATGAT CAGGCTATTG AAAACATGG GTTAAAGGG GTATTGATGG GCTTGGCTCG	5700
GATTTTACGT TGTATCCCT GGTGCAAAAC AGGTAAGGAC CCGTTCAG ACCGCTTTTC	5760
CCTTAAAGCA AATCAAGAAG GGAATGAGG TGGGTAAAT AGATTTCAA ATGATAAAA	5820
CGCATCCTAT CAGTTTGAG TGAACCTGAT AGGATGCGTT TTAGAAATGC AAAATTTAT	5880
ACTCTTCGAA AMTCTCTCA AACCCTGCA GCTTTCATCT GCAACCTCAA AACAGTGT	5940
TGAGCAACCT GCGCTAGTT TCCTAGTTTG CTCITTGATT TTCAATGAT ATTAATTTGA	6000
GTTTGAAGTG CTTATTTC AAGCTTTTTG TATGCTTCA ATCATGAGTT TTGTTGATTC	6060
AAGTCCGCT CCGCTTAGAT ACCAGAGGTC TGGTGTAGT TGGATAATCT TACCATTITT	6120
AGCAGCAGT GTTTCAGCA TAAGGCGATT TTCTAGGACA CCGTCGTGC TAGAGTTGTC	6180
CCCACCGATG GCAAGGTAT GGTGATGAC AAAGAGGATG TCAGGGTTGA TTTCTTTGAC	6240
ACTTTCAAAG CTGACTTCTT GTCCGTGCG TGAGCTTCA AATTTGTAT CAGTTGGTTT	6300
GAATTTCAAG GTTGGTACA AGAAAGAGAA ACGAGATTG GCACCAAAGG CTGCCATT	6360
TCCTTCATTA AGCAGGATCG CAAGGGCTTT TTTGTGAGAG CTTTCATTT TAGTAGGAC	6420
TTCTTGGATG CTCTGTCTA GCTTGGTCAA TTCTTCCCTG GCTTTCTGTG TACCAGTTTC	6480
GCCGAAGGCA CTGTCTAAG ATTCTGATTT AGCCTTGGTA GAAGTCCAGT AGTCTGCTT	6540
GCTTGCTTG AAGAGAACGG TTGGGCGAT TTCTTTGAAT TTGTCTACGA ATTTTGTGT	6600
ACGTGGCGAA GCGATAATCA AATCAGGCTC AAGGCGCGC ATAGCTTCTA ATCAGGTTTC	6660
TTTCATAGAA CCAACATTTT TGACAGTTCC CACTAGTCT TTTAGATAAG TCGGAACAGT	6720
TTTGTGAGC ATTCGACGA TATTTTTTTC AAATCCTAAG GCGGAAATAG TATCCGACGC	6780
GCGAGGTCA AAGTCAACA TCTTTTCAGG AACTTTGAA AGTTTGACCT CGTCAGTGA	6840
ACTTTTAATG GTTACTCTG TTGGAGCAGA GCTACTGGTC TCTGTCTGAC TAGTGCTTGA	6900
GTGTGTACTA CATGCACCAA GTAGAGCAA GAAGCTGGCC ACTAGGCGAG TGAATATAAG	6960
TTTAAAGGAT GTTTTCATAA TTCTCTCTT TTAATTTGTA ATAACGATTT AGGGAGTCTC	7020
TTAATCTTAT TGACTAAGAG ACTGAAGGTT CTCTAACTTG AGCTTTTATG TTACTAGCTA	7080
TAGATACAGA TCTTTTGTG ATTGATATCA GCTAGCGTGA TGGGAATCTC ATAAAGTTGA	7140

1062

CTCACCAGGT CAGCCTGCAT GATTGATCG CTCTCTCCCT TGCTAAAGAC CTGGCCGTCC	7200
TTGAAGGCGA CAATTTTCATC TGCTACTGA CTGGCCATGT TGATATCGTG GAGGACGATG	7260
ATTAACTCTT TGGCCGATTC CTCCACCACT CGTGAAGAA TCTGCATCAT GCTGACGCTT	7320
TCCTTGATAT CGAGATTGTT GAGTGGTTCG TCCAGCAAGA TAAAGTCCGT ATCTGGGCC	7380
AGTACCACATG CGATAAAGAC GCGCTGGAGT TGGCCCCCTG ACAGCCTATT GATGTAGCGG	7440
TCTTTAAGT TGGTCAGTTC TAAATAGTTC AGAGTTTCTC GGATTTTTC CCAGTCTTCT	7500
GATCTAAGTC GACCTCGCTG GTAGGGAAAA GCTCCMAAAC TGACCAGTTC TTCAACAGTC	7560
AATTTGGCTT GGTAAATGAT TTTCTGTTT AGGATGGTTA GTTCTGGGC CAGTCTTGC	7620
GAATTCACAG TCTCGATTTC ACGTCTTTG ATACTGAGAA CTCCCTGATC TTTCTTGOTT	7680
AGCCTGCTCA TGATGGAGAG GAGAGTCGAT TTTCCAGCAC CATTTGGACC AATAAAGCCT	7740
GTCAGTTTT GAGACTGAC TTCAAGCGAA ATGCTTGCA AAATATCCCTG TTTTGAATG	7800
GATTTGTCAA TGTTTCCAG TTCACTGAC GAGACCTCTT ATATAGTAAG ATAAAGATA	7860
AGAAGCCACC CACACTCTCA ATGATCATAC TGATACGAAT TTCCAGTGA AAGACTCGTT	7920
CAATCAAGGC TTGCCCAAG GTTAAGCTAA TAAATCCAAC CAGAATGGCC ACTATAAAGA	7980
GTAACTTGFG CTGATAGTCT TTGACAATCA GGTAGGTGAG GTTGGCCAGT ATAAAGCCGA	8040
AGAAGCCAT AGGTCTACC AAGGCAGTGG CCGTTGAGGT CAAAAGCAGC ATTCCCCAGA	8100
GGAGCTCTTT CTGTTCTTT TCAACATCGA GTCCCAATAT CTGAGCCGTT TCTCTTTGCA	8160
GGTCAAGAC ATCTAGAAGC ACTGCTTTTC GAAAGAAAAA GATTGTCAA GCGAGGATGA	8220
TCAGAGAACG GATGGCTAGG ATGGAAGTGT TGAGATGTTG AAAGGAGGCA AAAAGACTAT	8280
TTTGCAGTTT ATCCTATTCTG TTTGGATCCA TTGAGACTTG AAGGAAGGTG CTGATATTTT	8340
GAAAGAGACT TCTGAGCGCT AGACAGATCA GCGAGACGAA GACCAGGTCT TGCTTCATCA	8400
GTGTCTTCAA GTAACTTGT AAGCCGAGAA AGAAGAGGGA CTGGCAAGA AGTAAGACTA	8460
GAATTCTAA GATAGGGGAT TTCCCAAGTT GAAGAAACTT GCTTTCAAAA ACCAGTAGTA	8520
GGGTTGTFAG TAGGACGTAG AAGGATTCAA TTCCCAAAAT ACTAGGCCTC AGGAAGCGAT	8580
TTTCCGTGAG GTTTTGA AAA CTAAATGGTCG AAATCCAGT CCGATGGCT ACCAAGAGAT	8640
AAAGATGAT CTTTTGGGAA CGCAACTTCC AAGCAAGGC TGACAAGTGA GTGATGGGCC	8700
AAAGTAGAG AAGACAAGCT CCGATGGCAA GAATAATGAG AATCCAGAAG AGCTTGGTAT	8760
GTTCGTCTTT AGTCTGCATC TTTTCTCCC CTTCTCCAGA GAAGTAGGAT AAAGACGAGA	8820
CTACCGATGA TTCTTAGCAA GAGACTGACA GACAACCTAT AGGCTCTAAT CAGAAGCTCG	8880
GATAGGATAT CGCAAGCCAG AACTAGATTG GCACCAACCA GTGGACCATAT GAGTTTGGTT	8940

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TGACTTAGAT TATCTCCATA GGGCTTGGCA ACAAGATTGG GAACGATAAC TCCGAGAAAT	9000
GGTAGGCCAC CCACGGTAAT CATGGTGACG CTTGTGCTTA GCGCCACCAG AAGAGGGGCC	9060
AGTTTTTCAA GTAGGGAGTA GGAATCCCC AAACCTCCGC TGGTTCTTT CCCTAGATTC	9120
ATGATGGTGA AGGTTTGGGA TAATTTCCAA ACGGTTATCA GGATGATGAG GCCTAAGAAG	9180
AGCCAATCAT ACTGATGGGT CTGAATCATG GAGAAGGAGC CCTGGGTCCA GGCAGTCATA	9240
CTCTGAACCA GATTGAAACG ATAGGCGATA ACTTCTGTGA CTGAGCCGAT AATCCCGCTA	9300
TAGATGATCC CAATCAGAGG CAACATCCAC CTTTCTCTTA CAGTAAAAAT GGTCAATAAG	9360
GCTAGGAAGA AGAGGGTGAA TACGATGGAT GAAACAAAAG CGAAGAGCAT CTTGTGGGTC	9420
AGACTAGCCG ATGGAAGAC AAAAAGGCTC AGCACCATTC CCAGTTTGGC GGCTTCAGTC	9480
GTTCCAACTG TACTCGGTGC AGCAAACTGA TTTTGGGTAA TAGTCTGCAT GAGAAGGCCT	9540
GCCATACTCA TACTAGAGGC AGTCAGGAGA ATACTGATAG TTCTTGGGAG ACGGACTCT	9600
TGAAGAGGA GCCAGGTCTG CTGGTCGAAA TCAATAGACT TTCCCATGA AAAATCACTG	9660
GTCCCAATGC TAATAGAGAG AAGACTAGG AGTAGAGTA AGCCAGG	9707

(2) INFORMATION FOR SEQ ID NO: 165:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5910 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

CGCAATTAT GCTGAAAAG GAGTATACTT ATAAGTAACG CAACGTTTG CGTCTGAAAA	60
ATACGCAACG TTCCATTATT TTAACACAG AGGTGCTATT ATGAAAAAC GTCAAGTGG	120
TGTGTTGATG CACATCTCTT CTCTTCCAG AGCTTACGGA ATCGGATCAT TTGGTCAAA	180
TGCTTACGAC TTCGTTGATT TCTTGCTCG TACAAAACAA CGTACTGCG AATCTCTCC	240
ATTAGGACCA ACTAGTTACG GGGATTCTCC TTACCAATCT TTCTCAGCCT TCGCAGGAAA	300
CACTCATTTT ATCGATTGAT ATATCTTGGT GGAGCAAGGT TTGTTGGAAG CAAGTGACCT	360
TGAAGAGGTT GACTTTGGTA GCGATGCGCT TGAAGTTGAC TATGCTAAAA TCTACTATGC	420
ADGTCCTCCT CTTTGAHAA AAGCGGTGAA ACGTTTCTTT GAAGTCGGAG ATGTTAAAGA	480
TTTTGAGAAA TTTGCTCAAG ACAACCAATC ATGGCTTGAG CTCTTTGCTG AGTATATGGC	540
TATCAAGAGG TATTTTGACA ATCTTGCTTG GACTGAATGG CCAGATGAGC ATGCTOSTGC	600

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TCGTAAGCT TCAGCACTTG AAAGCTATCG TGAGCAATG GCAGACAAGT TGGTTTACCA	660
CCGTGTGACT CAATACTTCT TCTTCCAACA ATGCTTGAAA TTGAAAGCTT ACGCTAACGA	720
CAACCACATC GAAATGGTTG GGGACATGCC AATCTACOTA CGGGAAGATT CAAGTATAT	780
GTGGGCAAAAT CCACATCTCT TCAAAACAGA TGTCAATGGT AAGGCTACTT GTATCGCAGG	840
ATGCCCAACA GATGAGTTT CTGTAACCTG TCAGCTTTGG GGTAAATCAA TCTATGACTG	900
GGAAAGCAATG GACAAAGACG GCTACAAATG GTGATTTGAA CGCTTGCCTG AAAGCTTCAA	960
AATCTACGAT ATCGTTCTGA TCGACCACTT CCGTGGCTTC GAATCTTACT GGGAAATCCC	1020
TGCTGGTTCC GATACAGCAG CACCTGGTGA GTGGTGAAA GGTCCAAGTT ACAAGCTTTT	1080
TGCAGCGCTT AAGGAAGAAC TTGCTGAGCT AAACATCATC GCAGAAAGACC TTGGCTTCAT	1140
GACAGATGAA GTGATCGAAT TGCCTGAACG TACTGGCTTC CCAGGAATGA AGATCTCTCA	1200
ATTTGCCTTC AACCAGAAG ACGAAAGCAT TGATAGCCCA CACTTGGCAC CTGCTAAGTC	1260
AGTTTATGAC ACAGGAACAC ACGATAACAA TACGTTCTCT GTTGGTACC GTAATGAGAT	1320
TGATGATGCG ACTCGTGAGT ACATGGCTCG TTACACGAAC COTAAAGAAT ACGAAACAGT	1380
GGTACACGCT ATGCTTCTGA CAGTATTTTC ATCAGTTAGC TTTATGGCAA TTGCAACTAT	1440
GCAAGATTTA CTAGAATTGG ATGAGGCAGC TCGTATGAAC TTCCCATCTA CCTTGGTGG	1500
AAACTGCTCT TGGCGTATGA CTGAAGATCA ATTGACACCA GCTGTGAGG AAGGTTTGT	1560
TGACTTGACA ACAATTTATC GCCGAATTA TGAATTTG GTAGATTAA AGAATAAGA	1620
CAATAATCAG GAGACAACTA AACATGTTAT CACTACAAGA ATTTGTACAA AATCCTTACA	1680
ATAAACCAAT TGCAGAAATG AGCAATGAAG AGCTTTACCT TGCTCTTCTT AACTACAGCA	1740
AGCTTGCAAG CAGCCAAAAA CCACTCAACA CTGGTAAGAA AAAAGTTTAC TACATCTCAG	1800
CTGAGTTCTT GATTGGTAAA CTCTTGTCAA ACAACTTGAT TAACTTTGGT CTTTACGACG	1860
ATGTTAAJAA AGAACTTGCA GCTGCAGGA AAGACTTGAT CGAAGTTGAA GAAGTTGAAT	1920
TGGAACCATC TCTTGGTAAT GGTGGTTTGG GACGTTTGGC TGCTTGCTTT ATCGACTCAA	1980
TTGCTACTCT TGCTTTGAAT GGTGACGGTG TTGGTCTTAA CTACCACCTT GGTCTTTTCC	2040
AACAAGTTCT TAAAAACAC CAACAAGAAA CAATTCACAA TGATGGTTG ACAGAGCJAA	2100
ACTGGTTGGT TGCTCAAGC GGTAGCTACC AAGTACCATT TGAGACTTT ACTTTGACTAT	2160
CAACTCTTTA CGATATTGAT GTTACTGGTT ATGAAACAGC GACTAAJAAAC CGCTTGCGTT	2220
TGTTTGACTT GGATTCAGTT GATTCTTCTA TTATTAAGA TGGTATCAAC TTTGACAAGA	2280
CAGATATGCG TCGCACTTA ACTCTCTTCC TTTACCCAGA TGATAGTGAC GTCAAGGTG	2340
AATTGCTCGG TATCTTCCAA CAATACTTCA TGGTTTCAA CGGTGCGCAA TTGATCATCG	2400

ACGAAGCAAT	CGAAAAAGGA	AGCAACTTGC	ATGACCTTGC	TGACTACGCA	GTTGTCCAAA	2460
TCAACGATAC	TCACCCATCA	ATGGTGTATC	CTGAATTGAT	TCGTCTTTTG	ACTGCACGTG	2520
GTATCGATCT	TGACGAAGCA	ATCTCAATTG	TTGGTAGCAT	GACTGCCTAC	ACTAACCACA	2580
CAATCCTTGC	TGAAGCCTTT	GAAAAATGGC	CTCTTGAAAT	CTTGCAAGAA	GTGGTTCCCTC	2640
ACTTGGTACC	AATCATCGAA	GAATTGGACC	GTCGTGTGAA	GGCAGAGTAC	AAAGATCCAG	2700
CTGTTCAAAT	CATCGATGAG	AGCGGACGTG	TTACATATGC	TCACATGGAT	ATCCACTACG	2760
GATACAAGTG	TAACTGGGTT	GCAGCACTCC	ATATCGAAAT	CTTGAAAAAT	TCTGAGTTGA	2820
AAGCCTTCTA	CGACCTTTAC	CCAGAAAAAT	TCAACAACAA	AACAAACGGT	ATCACTTTCC	2880
GTCTTGGGCT	TATGCATGCT	AACCCAAGAT	TGTCTCACA	CTTGGATGAG	ATTCTTGGAG	2940
ATGGTTGGCA	CCATGAAGCA	GATGAGCTTG	AAAAACTTTT	GTCTTATGAA	GACAAAGCAG	3000
TTGTCAAAGA	AAAAATGGAA	AGCATCAAGG	CTCACACAA	ACGTAAATTG	GCTGTCCTCT	3060
TGAAAGAAC	CCAGGTTGTG	GAATCAATCA	CAAAATCTAT	CTTTGATATC	CAAAATCAAA	3120
GTCTTCACGA	GTACAAACGC	CAACAAATGA	ACGCTTTGTA	CGTGATCCAC	AAATACCTTG	3180
ACATCAAAGC	TGGTAAATCA	CTGCTCGTCA	CAATCACAAT	CTTCTTTGGT	GGTAAAGCAG	3240
CTCCAGCCTA	CACAATCGCT	CAAGACATTA	TCCATTTAAT	CCTTTGCAATG	TCAGAAAGTTA	3300
TTGCTAACGA	TCCAGCAGTA	GCTCCACACT	TGCAAGTAGT	TATGGTTGAA	AATACAAAGC	3360
TTACTGACGC	AAGTTTCTTT	ATCCCAAGCAT	GTGATATCTC	AGAACAAATC	TCACCTTGCTT	3420
CTAAGAAAGC	TTCAAGTACT	GTTAAACATGA	AATTCATGTT	GAACGGAGCT	TTGACACTTG	3480
GTACTATGGA	CGGTGCTAAC	GTGGAATTCG	CTGAGTTGGT	TGGAGAGAA	AACATCTACA	3540
TCTTCGGTGA	AGATTTCAGAA	ACTGTTATCG	ACCTTTACGC	AAAAGCAGCT	TACAAATCAA	3600
CGGAATTCCTA	CGCTCGTGAA	GCTATCAAA	CATTGGTTGA	CTTCATCGTT	AGTGAATGAC	3660
TTCTTTCGAC	TGGAAACAAA	GAGCGCTTGG	AACGTTTTTA	CAATGAATTG	ATCAACAAAG	3720
ACTGGTTTAT	GACTCTTCTT	GATTTGGAAG	ACTACATCAA	AGTCAAGAG	CAATGCTTG	3780
CTGACTACGA	AGACCGTGAC	GCATGGTTGG	ATAAAGTCA	CGTTAACAAT	TCTAAAGCAG	3840
GATTCCTTCTC	ATCTGACCGT	ACAATCGCTC	AGTATAACGA	AGACATCTGG	CACCTGAACT	3900
AATATCTTTC	GAAAACTCTC	TCAAACACAG	TCAGCTTTAT	CTGCACCTC	AAAGCAGTGC	3960
TTTGAGCAAC	TGGCGCTAGC	TTCTTAGTTC	GCTCTTTGAT	TTTCATTGAG	TATAAGATAC	4020
AAATTTATAC	TAATACATTT	TGTAAGAAAG	CGAGTTTCGA	TTGAAATTCG	CTTTTTTAAT	4080
GATGTAGATT	TGGTCAATC	TTGTCTAAAA	ATAGGGAAAT	CCTAGATACA	GTGAAGGCTT	4140



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TAAATGCTGG TTTTACTGT CCTCAGCCTT ATATTTTTTC GTAGTTGGTT ACCTCATATC	4200	
TATTATATTTC GCTTACATAA AGTATTATAA TATTAATTGTA GGAAGAAGG TGTTTTATG	4260	
ATATACACAC TTAATTGGT GTTGTTTATT ACCTTTCTTG TAATAAGCTT GTTACCTGAT	4320	
AAGATTTTGG GAAAAATAA AAAAATTGG AAAATAGTTT TTGCAATATT GACGGCAATG	4380	
GCAGCATTTT CATTATGTA CTAAGTTATT TTAAGAATGT AGGCAATAA ACCCTACATT	4440	
CTTTTATGTT TTTTCTGTTT TCTAATTCTT ATTTATCCAA GCGATTCAAC ATTTCTTGCT	4500	
TCCTTCGCTTC AAGTTCGCA CGCTTTTCTT CGATTTCGGC ATGTTTTTTC TCGAGTTTCA	4560	
AACAACCTGC ACCATTGCTA AATTCTTTTC GCCATCAGGA GATAGGGTGA GTCGACATGT	4620	
CTATTACTCA CCAAAAGCAG TCCTACAAAG CAGGAATTTT CTGTTACTTT TTTGGAATA	4680	
GTAACGTTTA TACAGCTTTG ACACTTCGTA TCAAAACGCC AAACACACTC CGAGGGGTTT	4740	
ACAGAAAGCA GAAAGGAAT GATCTGGTAT AAGATCAATC CTTTTCYCTC TTITTTCTTTA	4800	
AGTAATATCA TACAATGTAC GACGAAGTCG TCATTGCAAT GCTGATCCAC CACCTAAAGG	4860	
GAACTTTAA CAACATTGAT AAGATAAAGA ATATAAACAA CGAAATACG TTATACCCA	4920	
TTAATTTTAT TGATATATCT ATGATTAAAA GTTAMTCTT CCGTTGTTAG GAATGGCATC	4980	
ATTTTATACC CATAAATTGG CTAATAAGT CCCCGTGAT AATAAATCA TAGCGAATTC	5040	
TAAAGCAACA TCATTACAA ACCAACTACC TAGATATCTA GAAATGCTG AACGAATAGC	5100	
ACTTTTGTCT GCATGTTTTT CTTTTACTTT AATTAGATTT GCAAGGCCCTG CAGTAGTTCC	5160	
TCCTAATGCT AAGCTATTG CAGTATCTAA TAGAGCACCC ATTTGATTAA CTGTAATAC	5220	
TTGCCAACT GCTCTAAATG GAGAGTATGT AGGTGGGATT GTATAATCGC CTGTGTAATTG	5280	
TCGGTTAATT ACTTCTTTGA TCCATTGTTG TGAGACGCTT GGATGAAAG ATTGGATTTC	5340	
GTTTGCAAGT GTATTGATTT GTTCTTCTGT TAGAGAAGTG ACAGGTTGAA GTTCCATATT	5400	
TGTTTCAATT TGTGATACTT GTTCAGAAGC GTATACAGCT GAAACACTTG GAATCGCTGA	5460	
TACAAATTAC ACAATTGACG TCAAAAAAC CGAAATAAAT TTCATTAATT TGTTTCATAG	5520	
CTTTTCTCCT TTTTATTTCG ATCTGCTTAC ATTTTATCAT ATACTGTTAT TATAGTCAAA	5580	
AAAATATGCT ATTATGTTAA AAAAATATTT TTCAAAATAT AATTCGACGG ATTTATTTTG	5640	
GATTTTATTT GTTATTTTGA CTTGCCCTCA TATTGGTAAC CATGATTTGT TTACTCTCAA	5700	
TCATCAAGAA TTCTCTTTTC GTGTAGCGT TTGGGCTCTG GTACTGGCCT TATATCACTT	5760	
ACTATTCAAT GATAAGTTTG TTATATCGAA TCGAAAAATA AGATTAGAGC TATGCTTGAC	5820	
TGTGTACTTT TAGGATTTAT TTTGGAGGAA GATTTTGCTC CTATTATTTA TTATTTTAAA	5880	
TTTATTATTT TTGATAAGA TCTATTCTTT	5910	

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(2) INFORMATION FOR SEQ ID NO: 166:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 5406 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

GGCATAGGGA CTCATTTTTT CAACGTGCCA GGCTGGATAC CAGACTAATT TAACCTCAGT	60
ATCGGTACT TCTGGAACCT CTATCATAGC ATCAFAAATC TGGTCIGTCA AAAGGTCTGC	120
TAAGGGACAA CCCATAGTTG TCAAAAGTCAT GTCAATCTCT GTTTGCCCTG TGTACCGTC	180
AAAACGAATC TCATAGATCA AACCAAGATT GACAATATCG ATCCCAACT CAGGGTCGAT	240
GACTTCTTCC AAGGCTGTTA AATCCGTGT TTTGATGTTT TCAATTTGCT CTTCGTGATA	300
AGCCATATTT TCCTCACTCT TAGTCTTCAA TAAATCAGC AAGCGGTTTG CTACGACTTG	360
GTTGGCGTAG TTTTCTCAAA GCCTTTGCTT CAATCTGACG GATACGCTCA CGAGTTACGT	420
TAAAGACTTT CCCACATCT TCAAGTGTGC GCAATTTTCC ATCATCTAGT CCAAAACGTA	480
GACGCAGAAC ATTTTCTTCA CGGTCTGTAA GAGTATCTAA GATTTCAATCC AATTGCTCAC	540
GCAAGACGAT ACGAGTCGTA TAATCCACTG GATTTTCAAT CACTTCATCT TCGATAAAGT	600
CTCCAAGGTG GCTATCGTCC TCTTACCGA TAGGAGTTTC AAGAGATACT GGTCTTGGG	660
CAATCTTCAA GATTTACGA ACCTTATCAG GTGTCATATC CATTCGTTCA GCAATCTGTT	720
CTGGTGTGCG ATCTTGCCCC AATTTCTGAA GGAGATTCCG CTGTTACGA ACCAATTTAT	780
TGATAGTTTC AACCATGTGA ACTGGGATAC GGATGGTACG AGCTTGTGCC GCAATAGCAC	840
GAGTGATAGC CTGACGAATC CACCAAGTTG CATAAGTTGA AAACCTTGAAC CCTTTAGAAT	900
AGTCAAACCT GTCAACGCC TTCAATCAAG CCATATTTCC TTCTTGAATC AAGTCAAGGA	960
ACTGCATACC ACGACCGACA TAGCGTTTGG CAATGGAAAC AACCAACGA AGATTGGCTT	1020
COGCAAGACG TTGTTTGGCT TCGATATCAC CAGCTTCAAC AGCCAAGTGC AACTCTTTCT	1080
CCTCTTCAAT GGTCAAGAGA GGAACGACCC CTATTTCTTT CAAGTACATA CGGACAGGGT	1140
CATTGACCTT AGCAGAAGTT GACCCAATCA AGTCTCATC GCTGAGTTCT GGTCTTCTTT	1200
CATTGCTGAG AACACGGCGA CTTGGATTTC CTTCGTATC TGTGATAGAA ATGCCTGCAT	1260
CCTGAATCCG TTGCAAGAGA TCTTCAATCC CATCAGCGTC CAAGGTAAAA GGAATAACCA	1320
GACTTGCAAT GATTTTCATCA TCTGTTGCTG TCCCTTTTTC CTATGATTA CGGATAAATT	1380

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CTGCTACCTG TACGTCAAAT GTTGTTACTT CTTTGTGTTT TGTGCCATT ATFACTCCAT	1440
TCTTCTCTTT TGGGAAATTA AACGTTCCAA TTCTCTAGG GCTGTATCTG TATCTCCTAC	1500
ATGGCTAGCT TCCTGCACCT TCTTTTGTAT TCTCATATTT TCCTGATCCA AGAGAGCCTT	1560
GTTTCGAGTC ATCTCTACTT CACTAAGTTC CTGCGCGGAT ATCTCAGCAG GCAAAATCTG	1620
AGTATAAACT TGGTACCAAG CTCPTTCAAC TTCTCTGTCT TGCTCTGCTA AAACCTCTGG	1680
AGGAAGATTT CCATACTGGC CAAGCAAGTC ATATAAGACC TGAAATTCAG GTGTAGCAAA	1740
TGCAAGTCT TCTCGCAAC GGTAAATCGTT CAAAACAAGA GGGGATTCCA TCATCCGATA	1800
GAGTAGATGG GCTTCTGCCC TCATAATAGC CGATAACTGC TTGGTGACAG GCATGGTGAT	1860
TGGCGTCGGT CTGGAATATC CTTCATGCG ATCTGCTT TGACCTGAC GACTCTCAT	1920
AACAATCTGC TCAATCTGGG TATAATCAAA GGACGCCAGA CTGTACAGCTA AAATATGAAT	1980
ATAGCTGTTT TGAGCAGCGA TGGACTTTTC TTGAACAATC AAGGGAGCTA TTTTTTCAAG	2040
AAACTCAATC TGAGCTCGCA GATTTTCACT GTTTTCAGGT TGTACTGAT GAATGTAGAA	2100
CTCAATCGGA CTAATACGAG TTTTCTTAA TAGATAGGCC AAGTCTCTG GACCATTTTT	2160
TTGTAGATAC TCATCAGGAT CCAAGTTATC AGGCATGCTG ACGATTTGCA CAGGCATATC	2220
ACCAATTCA TCCAATGCTT TCAATGTGCG GGCCTGCCCA GCCTTATCTC CATCGTAAAC	2280
AAGAACCAAT TTCTTGGTAA ACCTTTTCAG ATGCTCAACA TGCTCTGAC TCAAGGCTGT	2340
TCCCATCGAC GCCACAGCAT TTTCGATTCC AGCCCGATAG GCTGCAATAA CATCCATGAA	2400
TCCTTCCATC AGGTAAATCT CACTAGCTTT TCCAGAAGAT CTTTTTGCCC TATCCATATG	2460
ATATAATTGG TAACTTTTGT TAAAAATTCG AGTCGATCGG CTGTTTTTAT ACTTAGAAGT	2520
TTGTGAATCC GTTTTTTGCC AGATACGACC TGAGAAGCA ATGACCTTTC CTTGGTCAAT	2580
TGTGAGGGA AACATAATGC GATTGTGAAA GGTGTCTACA AATTGATTGG CATCCGAGAG	2640
ATAAAACAGG CCTGAATCCA GTAAATCTC TTCACGATAC TGATCAGACA AACGTTGATA	2700
GAGATAGTTT CGTCTGAG GTGCTAAACC AATCCAAJJA TGTTPAAGCA CTTCATCTGT	2760
CAACCCCGCG TGATAAAGGT AATTCTGCG CTCTTCGCCC ATAGTCGTTG TCATGAGAA	2820
AGCATGTTAA AATTGCGCTG CATCTTCGTG CATATCATAA AGAGCTTGGT GAGGTGAGGC	2880
TGACTTCTGC TCACATAAAA GCGGTTTTTC AACCTCAAT CCAACACGCT GACCTAAGAT	2940
TTGGAATGCT TCTATAAAGG GAACCCCTTG GTACTCTCTG ATGAACCTAA AGACATCACC	3000
TGAGCGACCA CAACCGAAAC AGTGATAAAA CTGCTTGTCC TCTACAACAT TGAAGATGG	3060
TGTTTTTTCA CCATGAAAAG GACAGAGCCC TAGATAGTTC CGTCTGCTT TTTGTAAGA	3120
AAATCACATCT COTATGACTT CCACAAATGT GGCATTTGTT TTGATTCTTT CAATGACTTG	3180

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TTGTGCAACC ATACACAATA CCTCCATGTT ATCATAGTTT ACTTTATATA GTACTACTTA 3240  
 TTTCAGAAAA AAGATAAACC ATTTCACTCA TTTTCCCTAC TTTATTTCAA GAGTTGATAA 3300  
 TAATCAGAGA TTTTCATTTT TGCTTTTCTC TCTTGGTTTA AATCTTGAT AATTCGCTCT 3360  
 TCTTTTCATGA CAATCAGCG ATTGCCGATP TPGAGAGCAT CTTCATATG ATGAGTAATC 3420  
 ATAAGGGCTG TTAGCTGATC TTTCTTAACA AATTCATCTG TCAATTCAT CAANGCAACA 3480  
 CTAGTCTTTG GATCCAGGGC AGCAGTATCG TCATCTAACA GGAGTAATTC AGGTGCGCTC 3540  
 AAGGTTGCCA TCAAGAGACT CAAGCCCTGT CTTTGTCAC CTGATAAGAA CTCATCCGT 3600  
 GTATTCAAGT GTTCTCAAG ACCATTCTCT ACTTTTCAA TGGTTGCTG AAATTCATCC 3660  
 TTATAGCTAG TCAAGCGTCG TGGTAACAAT CCACGCTTTT CACCAAGAAA CTTGGCGATT 3720  
 AAMGATTTT CAGCGACCGT CATACGGGGA GCTGTCCCA TCTTTGGATC TTGGAAGACA 3780  
 CGAGACAGGT ACTTGGCAGC CTTCCTGGGT GAAAACCTAG TGAGATCTTC ACCTAAGATA 3840  
 CGGATAGTTC CACTAGTTAG TGATAAGGTC CCTGTATAG TGTAAAGAG AGTTGATTTT 3900  
 CCAGCACCAT TTCCGCCCAA AATCGTGATA AAGTCCCGTT CAAAAATTC TAAGGAAACA 3960  
 TCAATTTAAAA TAATCTTTTC TTCATCAAAG CCAATTTTAA CGATTTTGGT TGCATTTTTC 4020  
 AATTTCTCAA TTGCTGTCA TTTGCTAACT TGGCTCCTTT CAAGATTGTT TGTCTAAATG 4080  
 TTGGAATCAT GAGGCAGACT GCTAAAATCA AGGCATCTGA TAAACGAAGG TAACTTGAT 4140  
 TAAAGCCAAAG TGCGATAACT GCCCACACTA AAAATTGATA AGCGATAGAA CCTACAAAGA 4200  
 TAGTAACCAA ACGCTCTGCC AAGCTCAAAC TCTTGAAAAT AACTTCTCCA ATAATCAAAC 4260  
 TTGCAAGCCC CACAACGATA ACCCCGATCC CTGAGACAC ATCGGCATAA CCTTCTGCT 4320  
 GAGCAATGAG GGCACCTGCA AGGCAATCA CACCATTTGA TAAGACCAAG CCCATGAGCT 4380  
 CCATGCGTCC AGTATGAATC CCGAACTTC TAGCCATATC AGGATTTATCC CCTGTAGCAA 4440  
 TATAGGCTTG TCGAGTTTA GTGTCCAAGA AAAAGAGCAT GAGAGCAATA ACAATACTCA 4500  
 CAAAGATGAG ACCTGTCAAG AGTTGATTCA AATCCGAATC AAAAGGCAAA ACATCCTGAA 4560  
 TTTGCTTGGT TCCAAGCAGG CCTAAATTGG CACGTCCCAT AATCAAGAGC ATGATTGAGT 4620  
 GACAGAAGT CATCACAAA ATCCCTGAGA GCAAGTTGG GATCTTCCCT TTTGATATAA 4680  
 GAAGGCTGCG TGCCATTTCA GCCAAACAAC CTGCTCTAC AGCAACAAGT GTGCTAAAA 4740  
 ATGGGTTTCA GCCTTTGGTT ATCAAAGTGA CAGCAACAGC TCCCCAAGA GGAAGGAAC 4800  
 CTCTCTGCTG CATATCTGGA AAGTTTAAAA TCCTAAATGT CATAAAGATP CCCAGACTPA 4860  
 GAATAGCCCA GACAAATCCT TGAGAAATTA TGGAAACAAT CATATTTTAT TTAATCCTTT 4920

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CTATATTCAT CTTTTAAAA AATGGGAAGA GTCTCTCCT CCTACCTTA TTTATTCGAT	4980
GACTTGTCTT GCTCTCTTGA GAACAGACTC AGGAATAGTA ATACCTAGTT CTGTGTCTAT	5040
TTTTTTATTG ATGACTGACT TACCAGTTGA AAGACATTG ACTGGGGTAT CGGCTGGTTC	5100
TGCACCTTTC AAGACTTGCA CAATCATTTT ACCGTGTGCG ACACCAAGGT CATGTTGGTC	5160
AATTACAACCT GATGCCAACC CACCTACTTC TACCATAGCT GTCGCACTGG GATAAATTGG	5220
TTTCTTAGAA CTTTGATTCG TAGAGACAAC CGTTGGAAT OCTGATGCAA TGGTGTATTC	5280
AATGGGAACC CAATAGCAT CTACCTTGCT AGTCATAACA GTGACAGTTG AGGCAATTTT	5340
ATTGTGTGAA GGAAC TGCAA ATGTTTCCAC TGTACAGCT GCCTTTTCAG CATAAGCCTT	5400
AAATTC	5406

(2) INFORMATION FOR SEQ ID NO: 167:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9711 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

CAGCTTGCTC TTACTATTAT AGCAGATGTT ATAGCTGGAA TTATCTTGTA TTTCGTCTGC	60
AAATGGCTAG ATGGTAAGAA GTAGACCGAA TGACTAGCTT ATAAACACCC GTTAAATCGC	120
TAAGATACGT CAAAAAGCC CTTAACTATG GCACATAGTTA GGGGCTTTGG TGTCTAATG	180
AACCTTATAC ACTAACTACA TTCTAGCATA TAAGCCGAGA TATTCTAAGA GTTTTATTTA	240
TTGTTTAAAG TTTCTGAAAG TCTATAATGA AGTTAGCCAT CTAGTATCAA AAAACCGACT	300
AGCTCTTATG AACTAGTCGA TTTCTCATCA ATGGGCCAAC ATTTCTTGGG CGATTCTTG	360
GCCAGATAGG TTATCTGGGT AGTAGGTTGG CCAGTTGTCC ATTTCTTCAA AGAGGGCTTC	420
TTGGCTTGTC CTCCCAAGA AGATATGGAA ATGTTCTGCC TTAACITGGG CAACATTG.G	480
GTCACTAATC TGAACATCT TGAATTGTCC AGGCTCAGCA TCTGTGGCTT CAAAGAGGAA	540
ACGCACGCCA CGATTGCCCT TCTTGTAAGT CAAAAATTTT TTAACGACAT ACTTGAAGT	600
GTATTCTCTG CTGTTCCAC CTGAAACAAA TTCCAATAGTA TTATCAGTAA TGTAAATCTT	660
AGTCACATCT GTATGATAGC CTTTGTGATA GTAAGCCTTG TACTCAGCTT GGGTCATCTT	720
ACCAGTCAAC TTAGCCTTGT AGTCAGAGAC TTGTCGAAC GTGCCCTCTT CAAGGAAGG	780
ATAAACTGAT TGCCAGTTAC CTGCATAGTC ACTCAAGGT CGGTCTCTGA CAGTCGATC	840
CTCGAAGTAA CCATTTTGGG CTGCTCTGGT ATCCTCTGCC TTTTCAGGTT CAAATGCTGG	900

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GCCTTCTGG TCTGTGTTT GTTCAAAGC CTTGAGGTTT TTCTCCATCA CGGAAATGTA 960  
 GTTTTCTCCA GCCTTGGTGT CCTCTTCTGT CAGACTTTCT AAAGGATTGA GGACATCAGT 1020  
 TTGACACCT GCTTCTTTTG AAAGTGTGT AGCAAGGCT TGTGAGGCAT TTCTTCAAAA 1080  
 TAGATATAGG CGATTTTATT TTCTTTGACA TACTCTGTCA ATPTTGCCAA GCGAGCAGCT 1140  
 GATGGCTCTG CATCTGAGA AAGTCTGAG ATTGCGACTT GTTTGAGTCC ATAGTCCAAG 1200  
 GCAAGATAGT TAAAGCTGC GTGTGAGTC ACAAAGCTCT TTGTGTTTGC TTGAGACAAA 1260  
 CCTTCTGCTT AAGCCTTATC CAAGCCTTGC AATTTTTCGA TATAGGCAGC TGCATCTTTC 1320  
 TCAAAGGCTT CTTTTTTATC AGGATAATCT GCTGACAAGC TGTCGCGGAT GTGCTCTACT 1380  
 AGTTTAATGG CACGAACCTG TGATAACCAA ACATGGGCGT CAAACTCATG GTGATGACCT 1440  
 TCTTCTCCAT GGTGATGCT TCCCTCTTCT TCTCTGCCAC CTGGCAAGAG CAACATATCG 1500  
 CCTGTGCTCT TGAAGTTTTT CACTTTTTC TTATCCAGG TATCTAGCAA TTTAGGTACC 1560  
 CATGTTTCCA TGTTTTCATT TTCATAAAGC AAGCTATCTG CATCTTGAT TTTGGCAACT 1620  
 GCCTTGCGAG ATGGTTCCTA TTCATGAGGT TCTGTCCAG CACCGATTAG GAGTCTTACA 1680  
 TTAGCCGTAT CTCTGCGAGC TTGCTTGGTA AATTCATAGA CAGGGTAAAA GGTGTGACG 1740  
 ATATTGAGTT TACCATCTGC CTGTTTTTGA TTGGAACAAG CCACTAAAA CAAGGCACAT 1800  
 AGACTGGCTA GTAATAAGCT AATTTTTTTC AGTTCGTCT CCTATTGAT AAAAGTCTT 1860  
 ACTAAACTGA TTAGTATAAA GACAGTTACA AAAATAATGG TAATACTTGC ACTTGCAGGT 1920  
 GTTCTGCAAT AGTAGAAAT GTAAAGTCTT GCTACCATTC CCAAAAAGCC AATCGCACTG 1980  
 GCAAGCAGCA TAACCGATT TTAAAGTTTTT CCGAGACGCA GGGCAATACT AGCTGGCAAG 2040  
 ACCATATAGG TCGATACCAG AAGAGTCTCT GCTGCAGGAA TCATAAGGCG AATAGCCACC 2100  
 CCTGTCAACA TGTAAAAAG AATGGACATG GTACGAATCG GCAAGCCATC CAAAAAGCC 2160  
 GTATCTTCTT CAAAAATTAA GATATACATA GGACGAAGAA AGAGAAAGGT CAAAACTAAA 2220  
 ACAACCGCGC CATGACAAA GAGGGAATG ACCTGTCTCT CACTGATAGT CACGATCGAA 2280  
 CCAAGAGAT ATTGTTCCAA ACTCATTGAA CTCGAGCTTT TACCCTTGCT CATGACAATC 2340  
 AGAGAAACAG CCAGACTGT TGACATGAGC ATAGCTGTCC CGATTTCCAT AAAGCTCTTG 2400  
 TAAACCGTAC CGAGATACTC CAGAAAGACC GCGCAATCA AGACAATGCC AATAGTAGAA 2460  
 ACAGTTGGAG AAATCCCAA AACAGACCA AAGGCTACAC CTGAAAGTGA GACGTGCGTA 2520  
 AGGATATCAC TCATCAAACT CTGACGACGC AAGATGAGGA AGGTTCCCAA TACCGGTGAG 2580  
 AAAAGACTCA TAGCAATAAC CGCCAAAAAG GCGCTTGTG TAAAGTCGTA AGATAATAAA 2640

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CTAAGCATGG	CCCACTCCT	GCCATTCTC	ATGAACATTG	AAACACGCC	ATGGCGAGTC	2700
TTGGTACAG	ACTAGATGAA	TATTGGGATC	CGCATAATCC	TTAATTCTT	CAGGGTCATG	2760
GGTAATCATC	AAAACAGCCT	TGCCATGATG	ATGGGCGCTG	TGGTGATGTA	GTTCGTAAAA	2820
TTCAATTTTA	CTTCCTGCAT	CCATCCCCGT	TGTCGCGCTCG	CTTAGGATAA	ACACATCAGG	2880
GTCCAGAAGCA	AACATAAGCG	CAATTACCGC	TGCTCGCTTT	TGTCCCCAG	ATAGAGAGCC	2940
CAAGGGTTTG	TCTCGATGTT	CCCAATGCC	AAGTGAATCC	AGACTAGCTT	TGATATGCTC	3000
CTCATCATGA	GCATTCAAAAC	GACGGAACCA	GCCTTTTCTC	GGATAGCGAC	CCGACTTGAC	3060
AAATTATATG	ACCGTACTTG	GAAAACGAGC	ATTAATACTG	GCAATTTGTT	GAGGAAGATA	3120
GGCTATTCTC	AAATTCTTAC	CTTGGGTATT	TGCTTTGAA	ATAGCCACTT	TTCCAATGCG	3180
TGGTTGCAGA	ATTCCAAGAC	TAGCCTTGAT	GAGCGTCTG	TTAGCCGCTC	CATTTTCCCC	3240
AGTCAAGGTA	ACAATTCCCC	CACTATCAAC	ACAATAATTG	ATATGTTCAA	GAACAGGCTC	3300
CTTATCATAA	TAGAAGGACA	AATCCTCTAC	CGTAATATAT	CTCATATATT	GATTTCTCCT	3360
ACTAAGGAG	TCAAAAACCG	CTGAATCACT	TTTTGTTCAT	TTGGAGTAAA	CTGAGTCGCG	3420
ACTTGTTCAT	AGGTATAAAG	TGTATGCTCA	TGGTGATGGT	GGTGCTCCTC	AGCGATTGGA	3480
CGAGCCAACT	CAGTCAACTG	ATAAAAAATC	ACACGGCGAT	CTTTAGAATC	TTTATAGTGT	3540
TCCAACATCC	CTTCCCTGAC	CAAAGACTTA	ATGGCCTTGG	TAACTGCCGC	CTGACTGACA	3600
TTGAGACGAC	GGGCCAATTC	TGAATTTGTT	AAAGATTCTC	CTGACAGAG	CATAAGGATA	3660
TGCTCCTGAG	TATTGGTCAG	GGCCACCTCG	CTAGTGCAAT	GACCTATTAG	GATTTTCATG	3720
TGATTTTCGG	CCTGCAAAAT	CACCTCATTC	AAAAAAGCAT	TGATATCCTT	TGCTAGCTGT	3780
CTCATATCTG	ACTCCTTTCC	TTTAGACTT	CTCTTTTTTA	AGAGAAAAAT	ACTATTCTTT	3840
GACATTTTGT	TTACCAGTGA	ATTATATCAC	AAGCAAAAAA	AGAGTCAAGA	AAAAACGTGA	3900
AAACTAGTTT	CATCTTGAA	CTCTCTTATA	TTATATTATC	TATTGAAATT	CTTTGACATC	3960
TCCATCATAA	GTCGCCAAT	CTTTGCTGAA	AAAGCGCTCA	TTGAGATGGT	AAGTCGGAGC	4020
TGGTGTGGGA	TTGGATAGGA	AAGGATCAAC	TGCCCTTGTA	AAAGCCAACC	AAACCAACCA	4080
ACCAAGGTGA	ATGGTGTCCT	TCATAAAGAA	AGGCTCCCCG	CCGTCTTAG	AAAAATCTGC	4140
TATATTGGTA	AAACCTTGAC	TTTCTAATCG	GTAGCGAATC	TTCTGCACCG	TTTGTGGTGA	4200
CATATCTCT	CGTAGACCG	CATAGTTTCA	CCATTTTTTA	TTAACAGGTG	GAATGATAAA	4260
AATCGGGTTT	ACCTTAGATT	TAGAAAACCTG	TGTTAAAAAC	AAGTCAAGT	CATTATATCT	4320
TGGCGACTTG	AGATAGGTAA	AGCTTTTCTG	AGAATCCTTT	AATTTCTTCA	AATCCTCTCT	4380
GATCTGCTCA	TTATAGAAAT	AAITTTCCAT	TCCCATCTCA	TTATTGGAAG	TATTTTCTTC	4440

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AGCATCTGCT TTGACAACT CTTCATATGC CTGATAAGAA AACTGGTCTG GCAAGATTTT	4500
TAAATACCTA GCTACATGCT TATCGTAGTT AACATAGCCT CTAACCGAAA ACTGACCAAA	4560
AAAGGAAGCT TGGCGTTTCA TAAACGAGC CAATAATTCA ATCATTTTCA TGTCTGCTGT	4620
CGACAACTCT TCTTTACTTG CCAACTTCTG AACCGGTCC TTCAATAGCTA CGTTTGGGAA	4680
CTGTTGCTAG AAGCGAGTCG CTGCATATTG ACTAGCCTGA TCCCCAGATT GATGTTTCAG	4740
AAAACCTAGT AACTGGTCTC CATTAATAATA CTGCTGGAAG GCTGCTGGAT CATAGCCATT	4800
TTTACTGAAC CACTGAGGTG AGATAACATA CACAATTGT TTTATTTCCA GCTGTGGTAA	4860
CATCTGTTGC ATTCCAAAT ATTGGTTAAG CGATGCAGCT CCCCCCTGTC CTAAGAATA	4920
AGGACGGTAG GAACGATTGT ATTTCCTCAG TAATACCGCA GGATGAGCAC CGTCAAAACG	4980
AAGCCATTCA CTAGAGCCAA AGAAGGGAAC AAAACGCACA TTTGGATCAG ATAGTGTCTT	5040
GACTTTTTGA CTTCGCTCCT TAAACATATC GATAGTAGTA GCCACTGCTG AAGCTTTTTT	5100
AGCTCCTAGA TTATGATGCA TCTCAGTAGG ATAAAAGAAA ATGACAGAA AAACCAACAA	5160
ACCAGCGATC AAGACCGGTG CGAAGATCAT CCATAAGCGT TTAAGCATTT TGTAGCTCCA	5220
CANFACGAGC TATGATTTTA TTAGCTGTAT TCCAGTCGTC ACGACAAAC TCTGTTACAG	5280
GGACAGGAAT GTCAAAACGG TTCTCAATCT CCACAATCAA CTCAACGGTT CCCATACAT	5340
CCAAGACACC TGCAATCAAA AGATCTTCAT CCATCATGTC AGAAACATCT TCCATAAACA	5400
ACTCATCAAT AATTTCATA ACTTCGTATT TGATATCCAT ATTTTATTTT CTTTTATTTT	5460
TTAAACCATG GATTTATCAA GAATCCAGAA AAGATTAAGA ATGACAACAT GACAACATGG	5520
AAAGTGACAA CCATGCCAAG CAATCGAATC CAGCGATTCT CAGGTAGGAC AGCCTTCCCT	5580
GCTTTTTTCC GTTCCTTATT GAGCGTTTTT TTCTTGGAA CCGAGGCATC ATGTATGACC	5640
AAGCTAGTTC CATGAAGAG TCCATAGGCG ATATAGTACC AGGTCACACC ATGCCAAAA	5700
CCATAAATCA GCATATTTAC AATGTAGGCC ATGCTTGAGG TTACATTTACG ATTTTAAAG	5760
ACTTTCTTTC TGGTTAACAC CATCACCATT CGCATAAAGA CAAAGTCACG GAACCAAGAG	5820
GACAGACTCA TATGCCAGCG ATTCCAAAAC TCCTTTAAAT CCCTTGATAA AAAGGGCTTG	5880
TTAAAGTTGA TAGGGTACG GATTCCCATC AAGTTTGAGA TGGCCAAAGC AAACATAGAA	5940
TAACTTGCAA AGTCAAGAA GAGTTCCAGA CCAAAAGTAT ACATAACTGC CAAGGCATAG	6000
AGATTAAAGA AGCCACCTGA CTGCAAGGCT AAATCTTCA GAGGAGGTAG TAAGGCTCTT	6060
CCTAAACATG GAGCTAGGAT AAACCTATAC AAAAGCCCC ACATGATATA GCGGACAGAT	6120
TCATCCAGCA TATCCATCAA CTCATCTGCG TCAGGAATAG CTTGATAATT TTCAATTAAAT	6180



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CGCTTAAGC	GATCGATTGG	ACCACTCGAG	AAAGTTGGCA	TGAAGAGAAG	GAAACGGAGG	6240
AATTCACAGA	GGGTAAATCT	CTTAATCACT	CCATCTCTCA	GCCTGATGAC	AATTCCAACC	6300
GAACGAAAGG	TCAGGTAAAG	AATTCACAG	AACCAAGCA	AAGACTGCCT	TCATTTGATA	6360
GCTGGTTCCA	CTTGACAAA	GATTAATCGGA	AGTAGGGACA	GAAACTAAC	TAAGTAGAAG	6420
AGCCACTTGC	CATCTTTGCT	TTTTCGATAA	TGCTTGTAGA	AAAGCAGGAG	CAATATTTC	6480
CAGCAAAAGT	AAATACCCAA	GGCAGCTAGT	TGATTGCTCT	TTCCACCCAC	CAACATGCTG	6540
ACATAAAGA	AGAGACTTAC	CAACACTTCA	TACCAGGCAA	AGCCTTTCTT	GAAAAAGAGA	6600
CCTATAAAGA	TGGGCAAGGT	TGCAGCAATC	ACATAAACAA	AATACTGAGG	ATTGCCATAA	6660
GGCTCTAAAT	GAGGAAGCTG	TTGAAAAAAC	TCCATCATCT	CTTATTCAAC	TCGTTAATCA	6720
ATCCTTTGAT	GTCATCTTTT	CCATTGGAG	TTAGTGGCAA	ACTGTCTCGG	TAAAGGAATT	6780
TAGATTGGCAT	CATATAGGAC	ATCATGATGT	CTGTCAAGTC	TTCCCTTGATG	GCCTTGGTAA	6840
TATCGATATC	TCGCTCAAC	TGCTCAGCAA	CACCGCTTTT	TAAGATGACA	TAAGCCAATA	6900
GATTTGTAC	CTTGTGGTCC	TTGTTATAGC	CGGTACTGAC	GACAGCAGAT	TCGATAAAGC	6960
GAGACTTGT	GAGGTTTTGA	GAGACATCTT	CTAACTCAAT	CGGTAAACCG	TTAAACTTAA	7020
TCTGGAAATC	CATGCGTCCG	CCGTAGAGAA	GCAAGCCCTC	ATCTGTATAG	GTTCACCAT	7080
CGCCTGTGTG	ATAGGCTGGC	AGATCTTCAA	ACTCAAAGAA	GGCTTCTGCT	GTTTTTTCAG	7140
GATTTGTCTAT	ATAACCTTTT	GAAACAGCTG	GCCCAAGAAC	AATGATTTCT	CCCTGCTCAC	7200
CATTTGGCAG	TTTATTTCTT	TCCCTCGTCAA	TGATAAAGGT	TGGAGAATCA	GCCTTGGTAT	7260
AGCGCATTTG	TAGGCGTTTG	AGAGTGGCTA	ACATCTCGTC	TGTCACGGCA	ACTGCTGACA	7320
GAGCTACTGT	CGCTTCTGTT	GGCCCGTAAG	CATTGATGAT	ACGGGCATTT	GGGAAACGCT	7380
CGCGCATTTT	TTGAGCTGTT	TTGACCGTCA	ATTCTTCACC	ATCAAAAGTAG	AAATGCTGTA	7440
TTCCAGGCAT	TTTCTCACTG	TTGAAGTATT	CAGACAACAT	GGCCATATCT	GCAAAAGGATG	7500
GTGTGTATGT	CCAGATAGCG	ATTGGCAATG	AAAAGATAGC	CGCAAGAGAT	TGCTTAAAT	7560
CCTGATGTAT	GACTGAAGGA	AGAGTGAATA	CGGTACCACC	AAAGTCCCAAG	GTCGGTGCCC	7620
AATACATGAC	AGACAAGTCA	AAAGAATAAG	GTGGCTGTGC	CAGCATTTGC	GGACGACTCT	7680
GTGTGCAAAA	TTCCCTATCT	GTAAATCATCC	AGTTTGTAAA	GCTGAGGAGA	TTATCATGTG	7740
AAATCTGCAC	TCCCTTAGGC	TTACCAAGTC	TACCAGAAAT	AAAGATAATG	TAGTAATTAT	7800
CATCTCCCTT	GACTGGATGC	GTGATTTTCA	AGTTATTTCCC	TTGGGCAAG	GCTCTTTGAA	7860
CCTGAGCTAG	ATTATCATTT	GGTGTAGAAA	CCTGCTCCAA	GGGAAAGGCT	GAAATGGCAA	7920
TAACTAAGCT	TGCTCTGCT	ACTTCTAAAA	TAGCTGAAC	TCGCTCAAG	GCCGAATGCC	7980

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TATCAATTGG AATGTAGGCA TGACCTGACT TAGTCAGCGC TACAAAGGTT GCCAACATTT	8040
CATATTCCTG GCCACCAAAA ACAACCACAG GAGACTTCCT AGGCAAGCCT AGTTGGTCAA	8100
TGACTGCAGC CAACTATACC GAATCAGCCT TTAATTCGCC ATAAGTGCTG TCCTGCCCCA	8160
AAACATTATA GACAGGATAG CTAGGCTGTG TCTGAGCAAA ATGCTCAATG GTTTCATCA	8220
TATCTGCTAT TGGTTTATTT GACACAATAG GGAATCTCCT TCAAGTTAAA ATTCAATTATA	8280
GATAAAGCTT CCTTGACCTT GACCAAGATA GCTAAAGAAG TAAAGCAGCC CTAGAAAGAT	8340
AAGAAAATAC AAGCTGTCC GACCAAGAAA GAGGTACAAAT TCTTTCTCTT GTTTCATCAA	8400
GAAAAACCAT TCATTCTGT AATTTTTCG TAAATAAGA GTGATTCTTA CTAGCTTAAT	8460
TTTCTACCAT TGTACCACTT TATATAGTAT CTTTTCAAT GTTTACCGTA TGTTCCTAAT	8520
AGATTTCAGC TTATTTTAAG GATTATACAG TTTTTCATG TATATTTCA AATAGAGTGA	8580
TCCTGCTTCA AAACCTCAAT TCAGGAGACA ATGAAGTAA TCTTCCATA ATAAACACA	8640
CAATATCAAG TTTTTTCAAC ACCTGATACT ATGCGCTTT CTGATTTTTA AAGACTTTTT	8700
AACCACTCTC TCATTTAAAA TAATCTCGTC TGATATAAAT TAAAAAGCT TCTATCATCA	8760
GACAAATGGC TGATAGCCAA AAACCTGATC TAATACCAA ACTCTCAGTA ATATAGTCA	8820
TTAGCAAAAC AAATACGTAA AATGCTAATG TAGAAATCAC TTCAAGAACG GAATAGACAT	8880
TAACATAATG ATTTTCTCT ACTGTTTCTT GAAGAAATAC ACTTCAGGA ACTTCTTTA	8940
GTTGCGATAA CATACCAACT AAAGCTGAAA ATATATAAAA CATCTGTGCG TTTGGAAAAT	9000
ATAGAATAGT CAGTGTCACT ATTTCCATAG CTACAAGAG AAAAAGAATA CTTTCCCCC	9060
AAATCATTCA TACCTCTCTC AACTAGATGT AACTTACAAA ACCCCTGACC TCATGAGCCA	9120
CTTCTTCCTT CCFCATGAGG TCAGTTTTAC TTTCTGCTGT TCCAGTATCG TTTTTCCTCG	9180
CTAGATTTCC TCAAAAGGCG AGACTCTCTC CTGGTGCTG CACACGATTT TTTCACTCTG	9240
ACTGTTCTTT AATGCATCAT TAACGAGCCT TTTCTTCTAG GTGGTTCAAT AGGAACAGGA	9300
AGATTCAAGT TGACTTTTCT AATCCTAGAA TAAAGTGCTG AAAACAATTC GGAATAGGCA	9360
TAGAGACTAG ACAATTTGAG GAGCTGCTTG CGTCTGTTT GAACCAATTT TCCCACCAG	9420
TGAAGAAAAA GATGCGGAA GCGTTTGATT GTTAAAGTTT GGAAGTCACC TCCAGCTAGA	9480
TGTTTGAGAA AAAGATAGAG ATTGTAGGCG ATACAGCTCA TCATCATAGC AACTTCGTTT	9540
TTGATTAAAG TTGAACATATC CGTTTATATG CCAAAAAATC CTTCTTCTAT CTCTTGATG	9600
AAATTCTCGG CTTGACCAGC TCCAGATAA AGCTGAAACT GGTCTTGGCT GTTCCACTCG	9660
TCATATTGTT AACGAGAGAA ATAAACATCG AGAACAGTA TCCTTCTTTT C	9711

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## (2) INFORMATION FOR SEQ ID NO: 168:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 3025 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

CCCCCTTGTG AAAACTGTAA AATTAACGAC TCAACAATTC ATCTTTACAC CAATCTCAAT	60
GGAAACAA AACAATGTA CCTGTGTCAA AACTGTCTATA AGATTATCAA AACAGATCGT	120
AACAATAGCC TCTCAAAGG TATGACGGAT CTGAACAATC GTGACTTCGA TCCCTTTGGT	180
GATTCTTCA ATGATCTAAA CAATTCAGT CCTTCTAGCA ATACTCCTCC TATTCCTCCA	240
ACCCAATCAG GTGGAGGTTA CGGTGGAACG GCGGTTTATG GTTCCCAAAA TCGTGGATCT	300
GCTCAAACTC CGCCCACTAG CCAAGAAAAA GGCCTGCTGG AAGAATTTGG TATTAAATGA	360
ACTGAAATG CCGGTGCTGG AGACATTGAC CCGGTATTG GCGCGACGA TGAGATTATC	420
CGGTCTATCG AGATTCTCAA TCGTAGAACC AAGAATAATC CTGTCTTAT CCGTGAACCT	480
GGTGTCTGGA AAACGGCCGT TGTGCAAGGT CTAGCTCAGA AATTGTGCA TGGCGATGTG	540
CCACATAAAT TCAAAGGTAA ACAAGTCATC CGTCTGGATG TGGTTAGCTT AGTTCAAGGA	600
ACGGGGATTG GAGGACAATT TGAAGAAGCG ATGCAAAAAC TCATGGAAGA AATTCGCAAA	660
CGTGAAGACA TCATCCTCTT TATCGATGAA ATCCATGAAA TTGTTGGTGC TGGTTCTGCG	720
AGTGATGGTA ATATGGACGC AGGAAATATC CTCGAAGCCG CCCTTGCTCG TGGAGAACTG	780
CAACTAGTCG GTGCTACTAC CCTCAATGAA TACCGTATCA TTGAAAGGA TGCTGCCCTC	840
GAGCOTCTGA TGCAGCCTGT TAAAGTCGAT GAACCAACGG TGGACGAAAC AATCACTATT	900
CTCAAAGGGA TTCAAAAGAA ATACGAAGAT TACCACCACG TTCAATATAC AGATGCTGCG	960
ATTGAAGCAG CTGCAACTCT TTCCAATCGC TACATCCAAG ATCGCTTCTT GCCTGACAAG	1020
GCCATTGACC TCCTAGATGA AGCTGTTCTT AAGATGAACT TGACCTTGAA TTTTGTGGAT	1080
CCTAAAGTAA TTGATCAGCG CTGTGATTGAG GCTGAAATTC TCAAGTCTCA AGCTACACGA	1140
GAAGAAGATT TTGAGAAGCG GGCCTACTTC CGCGACCAGA TTGCAAGTA TAAGGAAATG	1200
CAAAAGAAAA AGATCAGAGA CCAAGTACTT CCTAGCATCA GCGGAAATC TATTGAGCAC	1260
ATTATCGAGC AGAAAACCAA TATCCCTGTT GGTGATTGTA AAGAGAAAGA ACAATCTCAA	1320
CTCATCCATC TAGCCGAAGA TCTCAAGTCT CATGTTATTG GTCAAGATGA TGCAGTCGAT	1380
AAGATTGCCA AGGCTATTGC CCGTAATCGT GTCGGAATTC GTACCCCTAA CCGCCCAATC	1440

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GGAAGCTCC TCTTCGTGG GCCAAGTGGT GTCGGTAAGA CAGAACCTTC CAAACAACATG 1500  
 GCTATCGAAC TTTTGGCTC TCGTGATAGT ATGATTGGCT TTGATATGAG TGAATACATG 1560  
 GAAAAACATA GTGTGGCTAA GTTGGTCGGC GCTCCTCCAG GTTATGTTGG CTATGATGAG 1620  
 GCTGTGCAAT TAACTGAAA AGTTGSCCAG AATCCATPAT CTCTCATCT TCTCGATGAA 1680  
 GTGGAAAAAG CTCACCCAGA TGTATGACAC ATGTTTCTTC AAGTCTTGGG CGATGGTCGT 1740  
 TTGACAGACG GCGAAGGACG CACCGTAGC TTCAAGGATG CCATCATTAT CATGACCTCA 1800  
 AATGCAGGTA CAGGAAGAC CGAAGCTAGC GTTGGATTGG GTGCTGCTAG AGAAGGACGT 1860  
 ACCAATTCTG TCCTCGGTGA ACTCGGTAACT TCTTTAGCC CAGAGTTTAT GAACCGTTTT 1920  
 GATGGCATTG TCGAATTATA GGCTCTCAGC AAGGATAACC TCCTTCAGAT TGTGAGCTC 1980  
 ATGCTAGCAG ATGTTAACTA GCGCTCTCT AGCAACAACA TTGCTTTGGA TGTAACTGAT 2040  
 AAGGTCAAGG AAAAGTTGGT TGACCTAGGT TATGATCCAA AAATGGGAGC ACGCCCACTT 2100  
 CGTCGGACTA TTCAAGACTA TATTGAGGAC ACAATCACTG ACTACTACCT TGAATAATCCA 2160  
 AGCGAAAAAG ATCTCAAGC AGTTATGACT AGCAAGGGAA ACATTGAGAT TAAATCTGCC 2220  
 AAAAAAGCTG AAGTTAAAG TTCTGAAAAA GAAAAATAAA TCCTATAAAA AAGGAGTAGA 2280  
 AAATGAATTT TTTCTGCTTC TTTTCTTACT AAAATAACTG TAAATTCTTG ACAGCTTGCC 2340  
 CTTTCTCCAT TATGATATAT AGTAGACTGA ATCTGAAATA GTACGAAACA ATTGCTAAAA 2400  
 CATTTATAGA AATTAATTTT ACTTCCCAA TCGATTGTGT CTCATCTTAT TTCAATCTGC 2460  
 TATAGTCAAT TGAACAAGA ACAAGACAAA AGAGCCTCAT AAAAGGTATT GCAACTTGGT 2520  
 AATACCTTTT TGAGGTGCTT TTTGATATGA GCCCATGTTT TCCTCAATAGG ATGTACTTCA 2580  
 GGTGAGTAGG GAGGAAGAGG TAAAGTTTA TACCCAAACT CTTCACAAA GAGTTCTAAC 2640  
 TTACCCATTC TATGGAATCT TGCATTATCC ATAAATAATA CCGATGGTGT GGTTAATGTT 2700  
 GGTAAAGAAA ACTTCTGAAA CCAAGCTTCA AAAAAAGTCG TCGTCATCGT CTCTTCGTAA 2760  
 GTCATTGGAG CGATTAACTC ACCATTCAAT TGTAGACCT GCAACCAAG AATTTCTCTG 2820  
 ATATCTTCTT CCAGATACTT TGCCTCTTCT TAACTGACCT TTTAATGAGC GACCATATTC 2880  
 TCGATAAAAA TAAGTATCGA ATCCTGTTTC GTCAATCTAA ACAGGTGCTA GGTGCTTTAA 2940  
 ACTATTAAAA TTCTTAAGAA ATAAGGCTAC TTTTCTGGG TCTTGTTTAT AGTAGGTGTA 3000  
 GTTCTTTTTT TTTTCGAGTG TAGCC 3025

(2) INFORMATION FOR SEQ ID NO: 169:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4104 base pairs

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(B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

TTTAAAGTTT TAAAAAAGT TTTGAAAGG TTCTCTCTTT ATTTTTTAAG GGAGAGATAA	60
CGTGTATATC TAAATCCTGG TCAAAGCCGG CAATTTTTTC TTATGATGTG TATTTGOTGA	120
TATCATAATC TAAATCAGTT TTAGGACTGC TCTCCAAAA TCCTGAGTCT GAGCCGTAGA	180
CGGAATCCAA ACAGAGGTAA ACTTGCCTGT ATCAATACTG TGTTCTTCCA TGAAGTAGAC	240
ACCAACGTAG ATGCCGATGT TTTTAGCACC CAGTGATGCT AGTTTGTCTC GAAAGTTTTC	300
GACACCTTGG TTCATATTAG ACATGGTTTT GTCTTCCACG TCAAGCCAAT AGTAACCTAG	360
GCTGTAAGGA GAGGCAGCAT TGTAGAAAAC TTCGGCAGCC TTTTCCATTT CTTGACACT	420
TTTTCCAGCT ACATAAGCGT AGACAGCAAC TGGGACATTC CGCTTTTGA GTTCAGTGAT	480
ATGACTCTTA TAGGCCTTGT CTATTCCATT GATAAATGAA GCATCATTTT CTTTTGTGCT	540
TTGAGCACCA CTGTGAACAC GAACAATAGC ACCTGAAATA TTTTGTGAGA GGGCATCGTA	600
GTTGATTTCC TCAGGACGCT GCCAGCCAGA GAGTCAATA ATCGTTTGT CTAGTGTTT	660
CAAAAGCTGT GCTTCAATCT GTGCTATATT GGAATTTGTT TTAACGATT GCGTGTCAAT	720
AAGTGGCGA TTGATGATTA AAATGAACAT CATAATCCCA AAAAACTAA ATAAAAATAAG	780
TGGATGAATT TGTTTCTCA TATCTTATAA TTCTACCTTA AAAATCAAAA AAAATCAAAA	840
AAATGGGTGA AGGAAGAGAC TTTAGAGCAT TTTTTCATTC AAGAGTGGG AATGATTTGA	900
AATATGCTAT AATAAAAGG AATTCTACA GAAAAGAGAA GATTATGTCA AATTTTGCCA	960
TTATTTTAGC AGCGGTAAA GGGACTCGCA TGAAATCTGA TTTGCCAAAA GTTTTGACA	1020
AGGTTCGGGG TATTTCATG TTGSAACATG TTTTCCGTAG TGTGGGAGCT ATCCAACCTG	1080
AAAGACAGT AACAGTTGTA GGACACAAGG CAGAATTGCT TGAGGAGTC TTGCTGAGC	1140
AGACAGAATT TGTGACTCAA TCTGAACAGT TGGGAAGTGG TCATGCAGTT ATGATGACAG	1200
AGCTATCTTT AGAAGGTTTG TCAGGACACA CCTTGTCTAT TGCAGGAGAT ACTCCTTTAA	1260
TCACCTGGTGA AAGCTTGAAA AACTTGATG ATTTCCATAT CAATCATAAA AATGTGGCCA	1320
CTATCTTGAC TGCTGAAACG GATAATCCTT TTGGTTATGG ACGAATTGTT CGTAATGACA	1380
ATGCTGAGGT TCTTCGTATT GTTGAGCAGA AGGATGCTAC AGATTTTGAA AAGCAATCA	1440
AGGAATACAA CACTGGAACA TACGTCTTTG ACAACGAGCG TTTGTTTGAG GCTTTGAAAA	1500
ATATCAATAC CAATAAGCT CAAGCGGAAT ACTATATTAC AGACGTCAAT GGTATTTTCC	1560

GTGAAACTGG TGAAAAAGTT' GCGCGTTTATA CTTTGAAGA AGTC'TTGGGG	1620
TAAATGACCG TGTGGCGCTT' GCGACAGCTG AGTCAGTTAT GCGTCGTGCG ATCAATCATA	1680
AACACATGGT CAACGGTGT' AGCTTTGTCA ATCCAGAAGC AACTTATATC GATA'TTGATG	1740
TTGAGATTGC TTGGGAAGTT CAAATCGAAG CCAATGTTAC CTTGAAAGGG CAACGAAAA	1800
TTGOTGCTGA GACTGTTTGT ACAAACGGTA CTTATGTAGT GGACAGCACT ATCGAGCAG	1860
GAGCGGT'CAT TACCAATTCT ATGATTGAGG AAGTAGTGT' TGCAGACGGT GTGATAGTCG	1920
GTCTTTATGC TCACATTCGT CCAATTCAA GTCTGGGTGC CCAAGTTTAT ATTGTAATCT	1980
TTGTTGAGGT GAAAGGATCT TCAATCGGTG AGAATACCAA GCGTGTATCAT TTGACTTATA	2040
TCGGAACCTG TGAAGTGGGA AGCAACGTTA ATTTGCGTGC TGGAACTATT ACAGTCAAAT	2100
ATGACGGCAA AAACAAATAC AAGACAGTCA TTGGAACAA TGTCTTTGTT GGTCAAAT	2160
CAACCATTAT TGACCACTA GAACTTGGTG ACAATTCCTT CGTGGTGTCT GGTCAAATA	2220
TTACTAAAGA CGTCCAGCA GATGCTATTG CTATTGGTGC GGTGCTCAG ATCAATAAAG	2280
ACGAATATGC AACACGTCTT CCTCATCATC CTAAGAACA GTAGGAGCCT ATCATGGAGT	2340
TTGAAGAAAA AACGCTTAGC CGAAAAGAAA TCTATCAAG ACCAATATTT AAATGGTCC	2400
AAGATCAGGT TGAATTACCA GAAGGCAAG GAAGTCCCA ACGGATTTTG ATTTTCCACA	2460
ATGGGCTGT CTGTGTTTGA GCAGT'AACGG ATGAACAAA ACTTATCTTG GTCAAGCAGT	2520
ACCGCAAAGC TATCGAGGCT GTCTCTTACG AATTCCAGC CGGAAAAATG GAAATAGGAG	2580
AAAACACAGC CCTGTGGCA GTCGCCCTTC GTGAATTAGA GGAAGAAACA GCCTATACAG	2640
GGAAATTAGA ACTCTTTGTAC GATTTTATTT CAGCTATTGG CTTTGTATAT GAGAAAGTTAA	2700
AACATATATT AGCAAGCAT TTGACAAAAG TGGAAAAATC GCGTCCGAGC GATGAGGATG	2760
AAACCTTGGA AGTCCCTGAA GTGAGCTTAG AAGAGCGAA AGAATTAATC CAATCAGGTC	2820
ATATCTGTGA TGCCAAGACA ATTATGGCTG TTCAGTATTG GGAGTTGCAG AAAAAATAGA	2880
GGAGGTCAGT ATGGTAAAT CTTTATTAAC GGATGAATG ATTGAAGAG CTAAATAGAG	2940
CGAAAAAATT TCAGTCTCTC CTTTGCTAGA TGATAATGAG GAACTAAGA TTTTACCAAC	3000
CTCTCTCTCC CGTTTGGTT ATGCCAATCC TAAGATCAT GGTTTTAGCC AGGAACCTT	3060
GAAATTTAGC GTCGAACCAT CTATTCAATA AAGCGTCTGT ATTGAATAA CCAAGAGAAA	3120
TGTCTCAAT TCTAAGTTGA ATAAATCTT ATTTGCGTC ATCTTCTCT TGAATTTGCT	3180
TGTTTATGCA ATGAACCTTT TGTAAATAGA AAGGAATTGA AATGAAAAA GGAATTTATG	3240
CTGCTATGCC AGAAGAACG GCTTATCTGG TCCAGCATTT AGATAATGCC CAGGAGCAAG	3300

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TTGTTTTGG GAATACCTAT CATACAGGAA CCATTGCTTC TCATGAAGTC GTTCTGTGAG	3360
AAAGTGGAAAT TGGTAAGGTC ATGTCCTGCTA TGAGTGTGGC GATTTTGGCT GATCATTTCC	3420
AGGTGGATGC CCTTATTAAT ACGGGTCAG CTGGGGCAGT AGCAGAAGGT ATCGCTGTG	3480
GGGATGTCGT GATTGCTGAC AAATTAGCCT ATCATGAAGT GGATGTCACA GCTTTTGGCT	3540
ATGCTTATGG ACAAAATGGC CAACAACCGC TTTATTTTGA ATCAGACAAA ACCTTTGTTG	3600
CTCAATCCCA AAAGAGTTTA TCTCAATTGG ACCAAAACCTG GCATCTTGGT TTGATTGCTA	3660
CAGGAGATAG TTTTGTTCGA GGAAATGACA AGATAGAAGC GATTAAAGTCC CATTTCCAG	3720
AAGTTTTAGC CGTGAGATG GAGGGGGCAG CTATTGCTCA AGCAGCGCAT GCCCTCAATC	3780
TCCAGTCTT AGTCATCCGA GCTATGAGTG ACAAATGCCAA CCATGAAGCA AACATCTTTT	3840
TTGATGAGTT TATTATCGAA GCTGGACGTC GCTCTGCCA AGTCTTGTG ACCTTTTGA	3900
AGGCTTTAGA TTAAGCGGAA ATTTGACAGT TTTTCTAGCT TATGATAAGA TTTAAGTAAA	3960
GAJAAAGTAG AAAACGTTTC AGAGGATATT ATGAGTATTG AAATGACCGT CAGTGAGATT	4020
GCAGAGGTCT TAGGATTATC TCGCCAAGCA ATCAATAACC GTGTCAAAGA ATTACCAGAA	4080
GAAGACACAG ATAAAAATGA CAAG	4104

(2) INFORMATION FOR SEQ ID NO: 170:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8876 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

CACGGATAGG CTCGGCTTTC ATCAGTCCTC AGGCTGATT ACTAATAGCA ACTTTCCTCG	60
ACAAATCCCA CAGCGATACG TntGGGTATC AATCCTACGC TTACGCTGAT ACCTTTGCTG	120
GCAGGATTGG CAACGATAGA GCTTGATTGG CTGGAGTTA CTATTGGCCA AGGATGGTAC	180
AAACCGTAAT CCATCCACTG CTTTCAACAG TTCTTAAAA TCCCGATCCT TGTGTGATA	240
GCTTTTCCT TGAATATAGA GTGATAATG ACAGAGTTCA TGTCCGACAA TTTTCTTAAA	300
AAAGTCCAC CCAGTTCCT GATAAACCT GGGATAAAA TCCAAATGCC CATCTTTGGG	360
GAAAAATGC CCACTGTGCG AACGTAGACG CCTATTCCAC TGGACATGAT GGATAAAAGG	420
TCTGCCAAG TCTTCTAGTG AAACCTGCTT GACGTAATCA GTCAAGTTTCA TTTGGAGCTA	480
GGAGAGACAG ATTAACTTTT TCACGTTTCTG TATCAATTIT CTFAACCCAA ACCTCACCA	540
AATCTCAAC TGCCACCACT TGACTAGGAT GTTTGATAAA CTTCGACTC ATATGGGAAA	600

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TATGGATGAG ACCGTCCTCA TGAATCCGA TATCAACAAA AGCACCAGAA TCACAAACGT	660
TACGCACCAC TCCTCTTAGC TTTGTGCGAA CCACTAAGTC CTTGATATCT AGGACATCTT	720
GGCGAACACA GGTGCGTCAA AGGAATCAGC GAAATCTCGA OCTGGTTTGA GAAGATCTGC	780
AATGATATCT TTAAGAGTTT CTGGACCAAG GTCTAACTCT TCGCCCATTT CCTTGACTGA	840
AAGCGACTTG AGTTTCGCTT GGGCTTCTTC GTTTAGGTCT TTAATATCTA AACGTTTGAA	900
GAGTTCCTTA ACTGCACTGT AATTCTCTGG GTGAACCTCT GTATTATCAA GGATATTGCT	960
ACTTTCAGGG ATACGAAGGA AACGACGAG CTGCTCAAG GCCTTGGCTC CCAGACGAGG	1020
AACTTTCTTG ATTTGCGGCG GTGAAGTGAT TTTTCTCTCT TCCTCGCGGT ATTGACAAAT	1080
ATTTTCAGAG ATAGTTTTGT TGAGTCCAGC TACGTGTGAA AGAAGAGCTG GGCTAGCTGT	1140
ATTGACATTG ACACCAACTT GGTAAACCAC TGTATCGACA ACAAGATCCA GACTCTCAGA	1200
TAGTTTCTTC TGACTGACAT CGTGTGGTA TTGACCGACA CCAATTGACT TAGGATCGAT	1260
TTTGACCAAT TCCGCAAGAG GATCTTGCAA ACGACGGGCG ATAGAAATGG CAGACGCTTT	1320
TTCAACGGTC AAGTCTGGAA ACTCCTGAGC AGCAAGTTGG CTGGCAGAAT AGACAGAAGC	1380
ACCACTTTCA TTAACGATAA CATAGCTGAC TTCAGGGAAA TCTTTTCAGAA CTTCCGCTAC	1440
AAAAGCTTCA CTTTCAGGAC TGGCGGTTCC ATTTCCCAAT GCAATAATCT CTACACCGTA	1500
TTGACCAATT AAATCTGCTA AATCTTTCTT GGCTTCTTGG ATTTGACGAG CTGATGCTGG	1560
TTTAACAGGA TAAATAACCT GAGTTGTGAG CATTTTCTCT GTTGATCCA CGACAGCTAG	1620
CTTGGCACCT GTACGAAGG CTGGGTCAAA TCCAGAAAC ACGCGCCCTT TCAGTGGAGC	1680
AACCAAGAGG AGATTGGGCA GATTGTGAGA AAAAAGTTGG ATAGCTCCTT CTTCAAGCTT	1740
CTCAGTTAAT TCTGTCCGAA TAGACGCTC GATAGCAGGC AAGACCTTTT TCTTAACGGA	1800
TTGCTGAACA ACTTCATCAA TATAAGCATT TTTCACCTTG AAACGAGTAG CAAGAAAGGC	1860
AAGAAACGCG TCGGTGCGAT GTTCAAAACC GATCTTCAAG ACACCAAGTT TCTCCCAAGC	1920
ATTGAGAGCC AAGGTACGAT AGCCTTGCAT AGTTCCAACT GTCTCTGAAA AATCATAATA	1980
AATCTGAAAA ACCTGCTTTT CATCAAGACT TTCATCCTTG GCTTGAGAAG TAAGTTTAGA	2040
GTGTCTCAGC ACTTCTGAT AAGTCATAGA ACGCAAGGTC ACATCTTCCG ATAAGGCTTC	2100
GACCAAAATA TCAACTGCAC CGGTCAAGGC TTCTTGCCA GTGCAAACTC CTTTCAGAC	2160
GAACTTTTCG GCTCTTTCTT CTAAGTCAAC TATATTCTCG AAAATCAAGC GAGCAAGAGG	2220
AAAGAGTCCA GCTTCAAGG CAATGGTGC CTTGGTACGA CGCTTTTCTT TATAAGGAAG	2280
ATAGAGTTCT TCACGTCTG CTAATTTTTC GGCAACTAAG ATAGCTTCTT CCAATTCCTT	2340



1082

GGTCAACTTA CCTGTCTCT GAATCTTAGC TAAGACAGCT TCCTTACGGT CATTGAGATT	2400
TGTCAGACTT TTATCCAAAT CAATTAATAGC CTAAATCGCC ACCTCATCCA GACTACCAGT	2460
CATGTCCTTG CGATAACGGC CGATAAAGGG AATAGTCGCC CCTTCAGCTG TCAAACTTAG	2520
AACGGFATCA ATTTGCTTTA ACGTCACTCC CAATCTCTGA GAGATTTTTT CATATTTTTT	2580
ATCCATAAAT CTATTAATACC ACAAGTAAA CGTTTCAAAAT TAACTCGTAG AACATTTAAA	2640
AAATATGTAG GAAATAGATT TATATGCTAC AGCGCAATAA CTTCGACTTA AAGAGCATTG	2700
CCACCTTTTT TTAACCAAGC CATGATATCA AAAGTATTTA ATGGATCAGA CATATAGGCC	2760
AGTTCTGGAA GATGTTCTCG ACCTGGAATA ACACATTGAC TTTTCAAATT TTTATATGGA	2820
CGATTGACTA AAATTAATTT ATTAGAATAA GGAAGATTAT CCATCTTATT TAAATTTCT	2880
TCACTAGCTG AATCTTTATT ATCAAATTTA AAATAAAGAT TATTCCAATT TATGCGTTTT	2940
TTTCTTTTTT CCCACTTAGT TCGTGCTTCT TCAACTAGT AATAATGTAG AAAATGAATA	3000
TCATATCTTC CTAAGTCGCC CAAAGGATAA ACTTCATGAG TCCAGCTCGG TGAATAAGT	3060
TCCTCTCGAA AAACAAGTTC TTGTTCCATA TAATAACGAA AATGCTTTGT AAGTTTATAA	3120
TAATCATCAG GAAGAATAAA TAAACCAACA AAAGGTGTTT TATATTGAAA ACCAAGCTGT	3180
TTATAAATTA ATCTCCAAC ACAATTATTA CTTAATATCG TAAAATCTAA TCTATCAAGC	3240
TCAAGAAAAA GGAATAATCC TTTCTCTGCA GCTATTAACT TATGATAAAC AATATCAGAA	3300
TCTAAATATT CACCGTCATT TTTTAACCAA GCACTAAAAT TTGCCAATTC TTGAATATAT	3360
TGTTTTTTCG CTCCTTCTAT ATCAATAGTT TCTAAGACGG CGCAATCTTT GATTCATATT	3420
TCATAATTTT CTAATATGAT TTTGTAGGAG TCTTTTAGAG GTTTAGCATC TATAACAGGT	3480
TTATAGATAT ATGTCGGGAA ATTAATATAG GTTGCAGTTT TAGAGTGAAT ATAAAGTCTC	3540
CAAAATAAGT TGTTTATATC AAATTGATTT ATTTTTCTGA AAAGCTTACT ATTGAATAAT	3600
TTTCCAAATA ATGAGCGATA TTGTTTCTTA ATTCGATGAT CTGTATCATC CATCTTTGT	3660
AAAACCTTGA CATTCGTATA ATTTCTGTGC AACCANTAT CCCCCAAAA AGGATAAAAG	3720
TAAATATCTC CATCAACCAA ATCAGCAAAA TGACCAAGAA CAACATCAGA ATCGGATAAT	3780
TTTATCGCAT GATACATCTT TTCAAATGTC CAATCAATAA ATGAATCATT TGAAGATAGA	3840
AACGTAAATAT AATCTCTGT AATCATATCA GACAACCTAG CAAAAGAATT CTCATCTATA	3900
ATCTTAATAT TAAATGATAG ATTATCTGT TGGCTAATGG AAGCTATCTC CTCTGTAGAT	3960
TGATTTACAA TAATAACTTC TATATCTTTT AATGTTTGTCT TCTCCACTAT TGACAAAGAC	4020
TCTAATAAAC TATTTTATC TCCTTGATGT AACAAAACAA CACTAATTGA GTAAGTCAGT	4080
TTGACTACCT CCAATAATTT TCTGATAATG ATTTCTCTTT TATTTAATTA TAGACAAATT	4140

1083

ATGATATATA TCAGGTAAATA TCAAGCTATA TTATCTCTTA GCTACTCAAT TTGAAATTTT	4200
AACCTTTTCCC TTTTCCGCAA AATAATAGTA TAATAGAGGT AGAATCTAGA ATCGAGGTAC	4260
ACCTATGGCT GTCAAATTTA CAAAACGAGA CGACTTGGAC AAGATGTTTG AAGAGTTTGC	4320
TAAACTCCCT GATTTGAAAC AAGTTACTTT CCTTGATGAC AAAGAGAAAA AAGTCAAAGC	4380
AGAAAGAAAA AACTAGATGA CTGCTTTTCA ACAACTCCCA TCTAGTGTAC TTCAAACGTG	4440
AGCCATTTTT CTCTCCATTA TCATTGAAGC CCTTCCCTTC GTCTTGATAG GAAGCATTGT	4500
CTCAGGGCTG ATTGAAGTTT ATATCACACC TGACAAGGTT TATCATTTTC TCCTTCGAAA	4560
TCGTTGGGGG AGAATCTTTT TTGGGACCTT TGTCGGTATA CTTTTCCTTT CTGTGGAATG	4620
TGGAATCGTC CCCATCATCA ATCGTTTTCT GGAATAAAGG GTTCCAAGTT ACACGGCCGT	4680
TCCTTTTCTT GTGACAGCAC CTGTTATCAA TCCCATTTGT CTTTTTGCGA CCTATTCTGC	4740
CTTTGGCAAC TCCTTCCATG TCGCCCTATT ACGAGCTCTG GGTTCATATC TTGTGGCTGT	4800
AATACTAGGA ATTTTCTTAG GATTTTCTG GCAAGAACCG ATTCAAGAAG AAAATCGCTT	4860
GGCTTTGTCAT GAGCATGATT TTCTTACTT GAGTTCTGCA AAAAAAGTTT TTCAAGTCTT	4920
TGTGCGAGCC ATTGATGAAT TTTTGTATAC GGGGCGTTAT TTGGTATTTG GCTGCCCTCT	4980
TGCTTCTATA ATACAGGTCT ACGTTCCGAC TCGGATTCTG ACCTCTATCA GTGCGACCCC	5040
CTTTTGTGCC ATCTGTGCTT TGATGATTTT AGCCTTCTTT CTTTGGCTCT GTAGTGAGGC	5100
GGATGCCCTT ATAGGTGCTT CTCTTCTCTC GAGTTTCGGT TTGGCACCAG TTCTGGCCTT	5160
TCTCGTCATT GGTCCAATGC TGGATATCAA AAATATTCTC ATGATGAAAA ATTACTTGAA	5220
AGCAGGATTT ATCAGTCACT TCATAACAAAT TGTAACTCTT GTGCTCTTAG TCTATTCTCT	5280
CTTGATTGGA GTTATCCTAT GATTGATTTT TTAGTTTTAG CTGGCTATTT TGAATGACT	5340
ATTTACCTCC ATCTGTGCGG CAAACTAAAC CAGTACATCA ACATGCACATA TTCTATCTG	5400
GCCTATATCT CCATGGTGCT TTCTTTTATC TTGGCTATCG TTCAATTGTA TATCTGGATG	5460
AAGCAAGTCA AAACCCACAG TCATCTGAAC AGCCGATTAG CCAAGATAAC GAGTATTTCT	5520
CTTCTGGCTA TTCCAATTTT CATCGGCTTA ACTTTCCCAA CTGTTAGCTT GGATTCTCAG	5580
ACTGTGTTCTG CTAAGGTTA TCATTTCCCC CTATCGAAG GAACGATCT AGCCATTCTAG	5640
ACAAGCGAAG GGACGACAAAG CCAATATTTG AAACCAAGATA CCAGTTCTTA TTTTTCAAAA	5700
TCAGCCTATG AAAAGGAAAT GCGAACGGCG GCGGATAAAT ACTTATCCCA AGATAGTATT	5760
CAGATCACTA ATGAAAACTA TATGGAAGTC ATGGAGCTTA TCTACGACTA TCCAGATGAG	5820
TTTGAGGGCA AGACAAATCCA GTTTACAGGC TTGTCTATA ACGACCCAGC TCATGCCAAT	5880

1084

AGTCAATTTC TGTTCGATT CGCATTATC CACTGTATCG CAGATTCTGG TGCTATGGA	5940
TTGCTGACCA AGGGCAATAC CCGGCAGTAT GAAACAACA CTGGATAAC AGCCAAAGGA	6000
AAACTGGTCA ATCACTACCA TAAAGAAGCT AAACAACACC TTCCAACCTT TGAAGATCGAC	6060
AGCTTTACCA AAGTCGATAA ACCAGAAAAT CCTATGTAT ATAGAGCTTT TTAAGAAAAAT	6120
CAAGATAAA ACGAACAAAT TCTCTCTGA ATACAGAAA AAGAGCCTGT TCGTTTTTTT	6180
TTATATGAAA ATTAGTGACT TGTAGATTTT CATCTTATAC CATTCOCAGC AATACAAAGTA	6240
GCTCATGAAA AATAAGCGAG CCACTCATTC ATTAGACTAG CGATTTCTTT AGGTGCTTGA	6300
GTATAAGCT CATGGCCAAA GTTTTCTMAA AAAATAGTAT CAAAATAGTC TGGCAATCTT	6360
TTTAGGGCTT CCTCTCTCCA TGTAGCTTCA TTAGGATAGC GAGGACTAAT AAACAAGTA	6420
TCTCCCACTT CTCTCTTAAA AGCTTGTATT TTTCTCGTA GCGGAGTATC GCTTCTATAT	6480
TTTCAATTA TTATAGCAAC TCATATCTAT TATACTCAAC ATTCAGTGA TAAGACTGTC	6540
TTACAGCTTT CTCATATTT TCTGACCAAT GCTTTGCTTC AGATTTTCTT TTAGAAGTAA	6600
GAACATCTAA GTCCGAAACA ATTGTAGATT TGAATATAAT TTTAGTTTCC TCTAACTCTG	6660
TATCCAAAGG TAAAATCTTA TCTAAATCTA GATAGCCACC ATCCAAAAGA ATCAGTTTCT	6720
TTACTTCTTC AAATTCGAT GCGAAATAC GAGCTAAATC TCCTCCAAGA GAATGCGCTA	6780
TCAGACAGAT AGATTCTTCC TCTACAATTT CATTTTAA CCATGNTTTC AATTCGTAT	6840
CATCTCGAAG ATGCTTTTCA TATGGATTA GAAAATAGAC CTGCGAATCT AGTTCCTGAA	6900
GAATTCCTT GCTATGATAG GCATTCCTTC CCAACCGCC AATAAATAT TTTTCAATTC	6960
TCTACTTAAT ACTATGCTTA TCTATCTTT GTTCAAGAT AGTTGTGATA ATCTGACGCA	7020
ATTCTCGCG TTTTTTTTCT GGAATCTCAC CACTTGTGTG AGCTACAGCG TAGAGTTTCA	7080
GGTATTCAAT TGAATGCGT TTAATCGTAC GTTGTGTAGC ATGTTTCTTG ACACAAAAAG	7140
GGATTGCTT AATCAAGTCT TGTGGACTA GCGCCAGAA CTCTCAGTA GTTCTTTGT	7200
CACATAATTT AGACATTGTA AGCCTTTTCT TAATCAATTC CTGTTCTTTT TCTGTAAAAAT	7260
CTTTAAATTC CATTCGATTA GTCTCTCTAT TTTCTTAAG TTAATTAATG TACTAATACA	7320
GATGAACATA CAAGAATAA ACTTTAAGAA ATCTTCTCAC TGATAGATT TTAGCATTAG	7380
ACTTCTGCG AAACAATAA TGGTATAGTA GTTCTATGAA TTATGAAGCA AGTAAACAAC	7440
TAATCATGTC ACGATTAAA GCTCTTGTGT GTCTTCAGCG CACGACTTTT GAAGAGATAT	7500
TAGCTGTATT AAAACAGCT TATCAACTTA AACACGAAA AGGTGAGCA AAACCTAAAT	7560
TAAGCCTAGA AGACCTTCTT ATGCCACTC TTCAATATGT GCGAGAATAC CGCACTTATG	7620
AAGAAATGCG GGCTGATTTT GGTATTCACG AAACCAACTT AATCCGTGCG AGCCAAATGG	7680

1085

TTTAAGTAAC TCTTGTTCAA AGTGFGTTA CGATTTCAG AACTCCTCTC AGTCTGAGG	7740
ACACGGTAAT GATTGATAGC CATTCCCATC AATATCGTAT CTTTGGACAT AGCCAATAAA	7800
TGTTTCATTT TTGCGTGGTT TCTGGCTATT AACGATTGAA ATAACCCACC AACTTATCAA	7860
AAATAGAAAT AAAAATCCTA AGATTACTGT CATATCATAA CACTATTAJA GTTTAACCCA	7920
CTTATCATTA TCCATGATAA AAGGCTTAGC CAGTCCCTCG CCTGTATAAT CCGCATACCT	7980
GGTGCCAAA TACTTTAGC AATCTTCCTT ACTAGCAAT TTAATCGCTT GGTAGGGCTC	8040
TTCGAAGTTC AACTTCTCTA CAAATAAGAA ACCGTCATCA GCAGGTACTA AGACCCCAAC	8100
GTGGCCTACA AACAGTACT CGCCATCCAA ATGTCTGTGC AAGACTACAG ACAGCATTCG	8160
AGCTTTTTCA TTGAATTGAA ATTGTGAGAA GAATGCTTCC ATCTTTTCAG COTGAACCTT	8220
GACATCTGTA GTTGACTCAG TTGGAACCTC CGAAAATAGA ATATCAAACCT CTTCCTTATC	8280
TTGTGAATCA AAGACCTTTC CTTTATCAAT CGCATATTA TCTAGGAAA GCAACTGGTC	8340
ATTCCTTTCA AGCTTTGGA TGGTGACTGA ATTTTTCAA AGACAATAAC TATTGATACG	8400
GCAGTTGGTC CCAACAAAAT CGCCCTTCTT TTGATTCCAG AGATGACTGA TTTTCTCAAC	8460
ATCGTATTCG CTGTGAGTAA AGGAGTGAA ATCTCTGTAT AGCCAGTTG AGCCGACAAT	8520
GGTATTATAG TCATTAAAGA GATTAAAAA TGCATCAACA CTATTGGAT CCAAGTGAGC	8580
TGATAAGAGA GATTGACCT CTTCTGTACT TACTGGTTG TTTAGGTTG TGTATGAAGC	8640
TTTCCATGGA ACTTTGCTG AACTGCTTTG CTTTGATTG GTCCCTCAG AAGTAGCATG	8700
TTGTTGTTGA CAAGCAGCCA AGCCTAAAA CAAGGCTGAA CAGATTCTTA ATGTGGCTAA	8760
TTTTCTTGAT TTTTCACTT CTTTCTCCTA AATGTCTTG ATTAAGTTT CTTTAACTAT	8820
TGCTTACAG ATATTGATTA CTTTCTCATT TAATGTGTC ATCGTCTTTC CTCGG	8876

(2) INFORMATION FOR SEQ ID NO: 171:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14736 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

CGCAAACTTT CGCGTGGGA AGGTAGTTTT ATGACACGAT TTGAGATACG AGATGATTTC	60
TATCTCGATG GAAAACTATT TAAGATTTTA TCTGGTGCCA TTCATTATTT TAGGGTTCCCT	120
CCAGAAGATT GGTATCATTC GCTCTATAAC TTGAAGGCTC TTGGTTTAA TACGGTAGAG	180

1086						
ACCTATGTTG	CTTGGAATTT	ACACGAGCCT	TGTGAAGTGG	AGTTTCATTT	TGAAGGTGAT	240
CTGGATTTAG	AGAAATTTCT	CCAAATAGCG	CAGGATTTGG	GTCTCTACGC	AATTGTGCGT	300
CCGTCTCCAT	TTATCTGTGC	GGAA/TGGGAA	TTCCGTGCGT	TACCAGCTTG	GCTCTTGACC	360
AAGAACATGC	GAATTCGCTC	ATCCGACCCA	GCATATATCG	AGGCAGTTGG	TCGCTACTAT	420
GATCAGTTAT	TGCCAAGACT	GGTGCCCTCGT	TTGTTGGACA	ATGGTGGCAA	TATTTCTCATG	480
ATGCAGGTTG	AAAATGAGTA	TGGTTCTTAC	GGAGAAGATA	AGGCTTACCT	GAGAGCGATT	540
CGACAGCTAA	TGGAAGAGTG	TGGCGTAAAC	TGTCCCCTCT	TTACATCAGA	TGGTCCATGG	600
CGAGCTACTC	TGAAAGCTGG	AACCTTAAAT	GAAGAGGACC	TCTTTGTAAC	AGGAAACTTT	660
GOTTCTAAGG	CACCTTACAA	CTTTTCGCAG	ATGCAAGGAT	TCTTTGATGA	ACATGGTAA	720
AAATGGCCAC	TCAATGTGAT	GGAGTTCTGG	GATGGTTGGT	TCAATGCTTG	GAAAGAACC	780
ATTATCACAC	GGGATCCCTAA	GGAAATGGCA	GATGCAGTTC	GAGAGGTTTT	GGAAACAAGC	840
TCTATCAATC	TTTACATGTT	CCACGGTGGT	ACAAACTTTG	GTTCATGAA	TGGTTGCTCA	900
GCTCGAGGAA	CTTTGGACCT	GCCACAAGTT	ACGTCTTATG	ATTACGATGC	CCTTCTGGAT	960
GAAGAAGGAA	ATCCAACTGC	TAAATATCTT	GCAGTCAAGA	AGATGATGGC	AACACATTTT	1020
TCAGAGTATC	CGCAGTTGGA	ACCACTCTAC	AAAGAGAGTA	TGGAGTTGGA	TGCTATTCCA	1080
CTAGTTGAAA	AAGTTTCTTT	GTTTGAAACC	TTAGATAGCT	TGTCAAGTC	TGTAGAAAGT	1140
CTCTATCCCT	AAAAGTGGGA	GGAGCTGGGA	CAAAGTTATG	GCTACCTACT	TTATGGAACA	1200
GAAACAAACT	GCGATGCAGA	AGAAAGAAAGA	CTTCGTATCA	TTGATGCTCG	AGATAGGGCC	1260
CAGCTGTATG	TGCAATGCTCA	GTGGGTTAAA	ACTCAATATC	AGACAGAGAT	TGGGGAAGAT	1320
ATTTTTTATC	AAGGTAAAAA	GAAAAGGCTA	TCTAGGTTAG	ATATCTTGAT	AGAAAATATG	1380
GGGCGTGTCA	ACTATGGGCA	TAAAGTCTTA	GCGGATACGC	AACGTAAGGG	AATTCGGACA	1440
GGGGTCTGTA	AGGATCTGCA	TTTCTTACTA	AACGGAAGAC	ACTATCCACT	CCCACTAGAC	1500
AATCCTGAGA	AAATTGATTT	TTCAAAAGGA	TGGACTCAAG	GACAACCAAG	CTTTTACGCT	1560
TATGACTTTA	CAGTCGAAGA	GCCAAAAGAT	ACTTACCTAG	ACTTGTCTGA	GTTTGGTAA	1620
GGGGTTGGCT	TTGTCAATGG	GCAGAACTTA	GAAGGTTTTT	GGAAAGTTGG	CCCAACTCTC	1680
TCACCTTTATA	TCCCTCATAG	CTATCTCAAG	GAAGGTGCCA	ACCGATCAT	TATCTTTGAA	1740
ACAGAAAGTC	AATATAAAGA	AGAGATTCAAT	TTAACTCGTA	AACCTACACT	AAAACATATA	1800
AAGGGGAGAA	ACTTATGACA	ATTGTAGGAT	GCGGTATTGA	TGAGCTTTTG	ATCCACGGAC	1860
AAGTAGCCAA	TCTTTGGGCT	GGAAACCTAA	ATGTTTCACG	CATTATGGTT	GTAGACGACG	1920
AAGTTTCTCA	CAACGATATT	GAAAAGAGTG	GTTTGAAACT	TGCGACACCA	CCAGGTGTGA	1980

1087

AATTGAGTAT TTGCCAGTT GAGAAAGCTG CAGCCAAAT TCTTGGTGGC AAATACGATA	2040
GCCACGCTCT CTTTATCGTG GCTCGTAAAC CAGACGCTTT CCTTGGTTTG GTAGAAGCAG	2100
GTGTACCACT TGAACCCCTT AATGTTGGGA ATATGTCTCA AACACCAGAA ACTCGTTCTA	2160
TTACACGTTT TATCAACGTA GTAGACAAAG ATGTGAAGA CTCCACAAA CTGGCAGAAA	2220
AAGGTGTFAA ACTTACTGCT CAGATGGTTC CAAATGATCC AATTTCAGAC TTITTTAGCT	2280
TATTAATAA GGAATAAAT TTTTAGGAGG TCATTGTTAT GATACAAATG TGGCAAAATT	2340
TACTTCTCAC TTGTACTCA GCTTATCAA TCTGTGATGA GTTGACGATC GTTTCATCTG	2400
CAGGTCTCCC TGTATTGCT GGTTCATTA CTGGTTTAA CATGGAGAT GTGACTACTG	2460
GTTTACTTAT CGTGGTAAC TTGCAACTGT TCGTCTTGG GGTGGTACC TTGGTGGTG	2520
CTTCTCGTAT CGACGCACT TCTGGTGGG TTCTTGGAC ACCTTCTCTG TTTCACAAGG	2580
AATTGATGCA CCGCTTGCCA TTACTACAA CTCTGTACCA GTAGCAGCTC TCTTGACTTA	2640
CTTCGACGTT CTGTGCTGA TGACTACTAC CTCTTCTGCT CACGCTGGG ATGCTGCAAT	2700
CGAACCGTTT GACTATAAG GTATTGAAC CAACTACTTG CTTGGTGGG TTCCGTGGGC	2760
TCTATCTCGT GCCCTTCCAG TCTTCTTGC CCTTGTCTTT GGTGGTGGCT TTGTCACATC	2820
AGTAGTAGAC TTGTTGAAG CTTACAAATG GGTTCAGAT GGCTTGACAC TTGCAGGAGC	2880
TATGCTTCCA GGTCTTGGAT TTGCAATCTT GCTTCGTAC CTTCCAGTTA AACGTAACTT	2940
TCACTACCTT GCTATGGGAT TTGGTTTGAC AGTATGTTG ACTGTTCTTT ACTCATATGT	3000
AACAGGTCCT GGTGGCGCTG TTGCTGGTAT COTAGGFACT CTTCTGCTG AAGTTGCTGA	3060
AAAAATTTGT TTCTGAAACA ACTTCAAAGG TTGTCTATG ATTGGTATTT CTATCTAGG	3120
TATTTTCTCT GCA/TGCTTC ACTTCAAAAA TAGCCAAAA GTAGCTGTAG CAGACCTTC	3180
TACACCATCA GAAAGTGGG AAATCGAAGA TGACGAATTC TAATTACAA CTTACAAAAG	3240
AAGATTTTAA TCAAAATCAAC AAACGTAGCT TGTTTACTTT CCAATTAGGT TGGAACTACG	3300
AACGTATGCA AGCTTCTGCT TACCTTTACA TGATCTTGGC TCAGTGCTG AAAATGTATG	3360
GTGATGGAAC TCTGAAATTG AAAGAAATGA TGAAGTTCA TACTCAATTC TTCAATACTT	3420
CACCATTTCT CCATACCAAT ATCGCTGGT TTGACCTTGC CATGGAAGAA AAAGATGGTG	3480
TAGTTTCAAA AGACGCGCTT AACGGTATCA AGACAAGTTT GATGGGACCA TTGCTCTCTC	3540
TTGGGGATAC AATCTTTGCT TCACCTGTAT CTGCTATCAT GGGGTGAGT GCACGAACTA	3600
TGGCTATGCG TGGCAACCT TGGGGATCT TCCTTTGGAT TGCAGTTGCA GTAGCGTATG	3660
ACATCTTCCG TTGGAACAG TTGGAATTG CTTACAAAGA AGGGGTTAAC CTTATCAACA	3720

1088

ACATGCAAG TACCTTGACA GCTTTGATTG ACGCTGCATC TGTACTTGGT GTCTTCA'GA	3780
TGGGTGCTCT TGTAGCAACA GTGATTAACT TTGAAATTTC TTACAAGTTG CCAATCGGGT	3840
AAAAGATGAT TGATTTCCAA GACATCTTGA ACCAAATCTT CCCACGTTTG CTCCAGCAA	3900
TCTTTACTGC CTTTATCTTC TGGTTGCTTG GTAGAAAGG TATGAACCTT ACTAAGCTA	3960
TCCGATTAT TATGCTACTT GCTTTGGCTC TTTCTGCCCT TGGTCACTTT GCACTTGGAA	4020
TGTAATTCTT TATGACTAAA TCATTAAATT TGGTGAGCCA TGGTCGCTTC TGTGAGGAGC	4080
TTAGAGGTAG CACAGAAATG ATTATGGGCC CACAAGACAA CATTTACACA GTAGCTCTTC	4140
TTCCAGAAGA TGGCCAGAA GAATTTACTG CTAATTTGA AGCTGTTATT GAAGGATTGG	4200
ATGATTTCTT AGTCTTTGCG GATCTTCTCG GTGGGACACC TTCTAAATGG GTGAGTGGCT	4260
TGATCATGGA AGGTGCTGAT ATTGACCTTT ACGCAGGGAT GAATCTTCCA ATGGTGATTG	4320
AATTTATCAA TGGGAGCCTT ACAGCGCGAG ATGGCGACTA CAAGAGCCGT GCTGCAGAAA	4380
GCAATTGGAG AGTTATGAC CTGTTAGCGG GCTTCGATGA TGACGAAGAT GAATTAATCT	4440
CTTCGAAAT CTCTCAAC TACGTCACCG TCGCCTTGCC GTAGTATAT GTTACTGACT	4500
TGTCAGTCT TATCCGGCAA CCTCAAAACG CTGTTTTGAG CTGACTTCGT CAGTCTTATC	4560
CGGCAACTC AAAGCAGTGC TTTGAGCAGC CTGGGCTAG TTTCTACAG ATTTTAGTTG	4620
GAATCGATT CAATTCATGT GACAACTGA AATCGTTAG AGCATTTTAT ATAGAATATA	4680
CATGGGAATG TAGCTTACTC CCATTCCTAT ATTTAATAGA AAAAGAGGAA CTCAATGCTA	4740
CATTATACAA AAGAAGACTT GCTCGAATTG GGTGCAGAAA TCACTACCGG TGAATCTAC	4800
CAACAGCTTG ATGTATGGAG AGAAGCTTTT GAATTTTATC AAGCAAAACG TGAAGAAAT	4860
GCAGCCTTCC TACAAGAAAT CGCTGATAAA CATGACTATA TTAAGGTTAT CTTGACAGGT	4920
GCTGGGACTT CTGCTTATGT GGGAGATACC TTGCTACCTT ATTTTAAGGA AGTCTATGAC	4980
GAACGCAAA GGAATTCAA TGCTATTGCG ACAACAGATA TCGTGCCAA TCCAGCAAC	5040
TATTTGAJAA AAGATGTGGC AACTGTCTT GTGTCTTTTG CTGTTAGTGG GAATTCGCT	5100
GAAAGTTTGG CGACTGTGTA TTTGGCCAAA TCCTTGGTGG ATGAGCTTTA TCAAGTGAG	5160
ATTACTTTGTG CAGCAGATGG TAAATTTGGT CTTCAAGCTC ACGGTGATGA TCGTAATCTC	5220
TTGCTCTTG CACCAAGTGT CTCTAATGAT GCTGGATTG CCATGACTTC TAGCTTTGAA	5280
TCTATGATGT TGACAACCTT CTGTGCTTTT GATCCTACAG AATTTGCTGT TAAGTCTGAA	5340
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GACCTCGTTG ATTTAGACTT TAACCGTGT ATCTATCTAG GCGCTGGTCC TTTCTTTGGA	5460
CTGTCTCATG AAGCTCAGCT CAAGATTTTG GAATTAACCT GCTGCTCAAG TGGACCATG	5520

TATGAAGGCC	CAGTTGGCTT	CCGTCAAGGT	CCAAAACTC	TTATCAACGA	CAATACAGTT	5580
GTTTTGGTCT	TTGGTACAAC	GACAGACTAC	ACTCGTAAGT	ACGACTTGGG	CTTGGTTTCT	5640
GAAGTTGCTG	GTGACCAGAT	TGCTCGTCTG	GTGTGCTTTT	TGAATGATCA	AGCTTTTGGT	5700
CTTGAATAATG	TCAAAGAAAT	GGCCCTTGGT	TGTGGCGGTG	TCCTGAATGA	TATTTACCGT	5760
GTCTTCCCTT	ACATCGTTTA	TGCCCAACTC	TTTGTCTTAT	TGACTTCACT	CAAGGTAGAA	5820
AATAAACCCAG	ATACACCGTC	TCCTACAGGT	ACAGTAACCC	GTGTAGTACA	AGGTGTCATA	5880
ATTTCAGCAAT	ATCAAAAGTA	AGACAGTGTT	TATGAATTTCT	TGACAAGAGG	ATTGTAAAT	5940
TATCAGATAA	ACCATAGATT	GTGAGTACGC	TTTCTATGGT	TTGTTTGGCT	GAGAGAAATA	6000
GTAAAAGGAG	AACAGAATGA	AAGCATACAC	AGAGCGTGTA	TTTGGAAATG	TTGAGGGTGA	6060
GGATGCTCTG	GCCTATCGAT	TTGAGACAGA	CGGTGGCTAC	CAACTTGAGG	TTATGACTTA	6120
TGCTGGGACT	ATCTTGGCT	ATGTGCGACC	TGACAAAGCT	CGAAATTTTG	CCAAATGTTAT	6180
CTTGGGATTT	GATGACTTTG	ATAGTTATGT	AGGCAATAGT	CCCAAGCATG	GAGCAAGTGT	6240
AGGTCTCTGTA	GCGGGTCGTA	TTGCAGGTGC	GACCTTTGAG	CTCAATGGTA	AGACCTATGA	6300
CCTTGAGGTT	AATPAATGCTA	GCAACTGTAA	TCACAGTGGT	TCAACTGGTT	GGGATTCAG	6360
CTTGTTTTGA	GTGGAAGAAG	TAAAGGATCA	TGGCTTGACT	CTCTACACAG	AGCGTACAGA	6420
TGGGACAGGA	GGGTCCCTG	GAAATCTCAA	GATTTGGATC	AGTTATCACT	TGGAAGAAM	6480
TGGTGCTAT	GAAATCAGCT	ACAAGGTAAC	GACCGATCAG	GATACGCTGG	TCAATCCAAC	6540
CAACCCACAGC	TATTTCAACT	TGCTGGTGA	TTTCACGCG	ACGATTGACC	GTCAATGCTT	6600
CCAACTAAAC	ACAGAGGGCA	TTTACTCAAT	CGCTCCTGAC	GGTGTTCTTG	CCAAAACCTC	6660
AGAAGCCAAC	CGTGATGTGG	TCAAACACGT	CTACAAATGT	ACCTTGTGTA	AGGATATCTT	6720
TGCAGAGAA	GATGAGCAA	TCCAGCTGGC	ATCAGGTTTG	GATCATCCAT	TTGCCCTTCC	6780
TGCAGGCCAT	GACAATGCTG	GATTCCTTTA	TGACCAAAAT	TCAGGTGCTC	TCTGCTTTT	6840
CAAGACAGAA	GCTCCTTGCT	TTGTGGTCTA	CACAGCAAAC	TTTGTGGATG	AAAGTGTGAT	6900
CATAGGAGGT	CAGCCAAATG	TACAGCACAA	TGGGATTTGCT	CTTGAAGCGC	AAGCTTTACC	6960
AGATGCCATT	CACAGTGACC	TTAAAGGCCA	AGTATTCTT	AAAGCTGGTC	AAACCTTCAC	7020
CAGTAGACAA	CGTTATGAAC	TTGTGTGAA	GTAAAAGAGT	CATTGGCGCT	ACTTTTGGGA	7080
GCTAGGAATA	GGTACGCGA	GACAAATAGT	AGGAAAATAT	GATATAACTA	AGCGTTGAAA	7140
GCTATCTGTT	AATATAATAT	TCAAATACAA	ATAAGGAGTA	AGAAAGAAAC	GAAGAAAATT	7200
GTATTTGCTA	GTGCCCTTGGC	TTTGACCTTG	GCTGGAGCAG	TTTTGACAAA	TGATGTTTTT	7260



1090	
GCGAACGACA GACTTGTGGC AACACAAACT ACTGATGGTA AAAATGAAAA TGTATTGACC	7320
TCAGAGGTGC TAAACCTTC TAGTGGCAAT GTTTTGGTTG GAATCAAAG AGAATTGTG	7380
GCTCCTCATC AACAATCTAT TTGGATGCC ATCAATGCTA TCTGTAAAGA AGCGGCTGAC	7440
GAAGGTTTGG TAGATAAGTA TGTCCCTATC AAATGATCAA CTGACCTAGA AAAGGCAGCT	7500
TTTGGCCAGAG CTACAGAAGC ATCTATAACC ATGGATCATA CCGTCTTTTC TAGCAAGATG	7560
CTTTGGAGTG CCTTCCAAC TTCTAATAGT ATAATGGGAG AAAATTTGGC ATGGAATCAT	7620
GACGTTTTTC TAAAAGTAT TGAACAATGG CGTGCTGAAA AAGCAGATTA TGTGGAGAAA	7680
AAAATAGTGG TTCAGACAAC GGGAAATCTG GTCACATGA GTCGCTAATT AACCTTAAAT	7740
TTACACACAT GGGGATGGCA GCTTTTAAAA ATCTTAACAA TCAATACAAA GCTATTACAA	7800
TTGCTCAAACT TCTAGGTGAT GATGCTTCTT CAGAGGAATT GCGTGGTGA TATGGTTCTG	7860
CTGTTTCAGTG TACAGAAGTG ACTGCCTCAA ACCTTTCAAC AGTTAAAACT AAAGCTACGG	7920
TTGTAGAAAA ACCACTGAAA GATTTTAGAG CGTCTACGTC TGATCAGTCT GGTGGGTGG	7980
AACTAATCG TAAATGGTAT TTCTATGAGT CTGGTGATGT GAAGACAGGT TGGGTGAAAA	8040
CAGATGCTAA ATGGTACTAT TTGAATGACT TAGGTGTCAT GCAGACTGGA TTTGTAAAAAT	8100
TTTCTGGTAG CTGCTATTAC TTGAGCAATT CAGGTGCTAT GTTTACAGGC TGGGGAACAG	8160
ATGTTAGCAG ATGGTTCTAC TTGACGGCT CAGGAGCTAT GAAGACAGGC TGGTACAGAG	8220
AAAATGGCAC TTGGTATTAC CTTGACGAAG CAGGTATCAT GAAGACAGGT TGGTTTAAAG	8280
TCGGACCACA CTGGTACTAT GCCTACGGTT CAGGAGCTTT GGCTGTGAGC ACAACAAAC	8340
CAGATGGTTA CCGGTAAAT GGTAAATGGT AATGGGTAAA CTAGGCTCAG GCCATAGGTA	8400
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GTAAGCTAAT ATTTTATAGC CCATTAAGG CATTAAGCGT AATCTAATTT AAAAATGCT	8580
GTAATTAGTC TGAAGTCCAC ACTTACTTGT TGAGATGTTA TCTCTGTTT TTATCGTTA	8640
AATTTACTGT ATTTTATATA GTATGCAGAA TATTTTAAAG TATATTTCAA TAGAAATTTT	8700
TATCGATTTA TTGTATAATG ATAAGTAATT GTTGAAAAGT ACTCAGAAAA TTCCAATACTA	8760
TATTAATTTT ATGTTTATAC TTTTATGCTA TAAAAATAG ATTGTATATA AGAATATATA	8820
AAAAGCGAGG TTAATATGAG CCGAAAAAGC ATTGGTGAGA AACCCATAG TTTCTCGATG	8880
AGAAAGTTGT CAGTGGGATT GGTATCAGTT ACTGTATCTA GTTCTTTTTC GATGAGTCAA	8940
GGGATTCAT CGGTATCGGC CGATAATATG GAAAGTCCAA TTCAATATAA GTATATGACC	9000
GAGGGTAAAT TGACAGACGA GAAAAAATCC TTGCTGGTAG AGGCCCTCC ACAACTGGCT	9060

1091

GAAGAATCAG ATGATACTTA TTAAGTGGTT TATAGATCTC AACAGTTTTT ACCGAATACA 9120  
 GGTTTTAAAC CAAGTGTGG TACTTTCCCTT TTACTGTCAG GATTGAGCTT GTTAGTTTAA 9180  
 TTGGTTTCTA AAGGGGAAAA TGGAAAGAAA CGACTGTGTC ATTTTCTGCT GTTGACTAGC 9240  
 ATCGGAGTTC AATTGTTGCC GGCCAGTGCT TTTGGGTTGA CCAGCCAGAT TTTATCTGCC 9300  
 TATAATAGTC AGCTTTCTAT CGGAGTCGGG GAACATTAC CAGAGCCCTT GAAATCGAA 9360  
 GGTATCAAT ATATTGGTTA TATCAAAACT AAGAAACAGG ATAAATACAGA GCTTCAAGG 9420  
 ACAGTTGATG GGAAATACTC TGCTCAAGA GATAGTCAAC CAACTCTAC AAAACATCA 9480  
 GATGTAGTTC ATTACAGCTGA TTTAGAAATGG AACCAAGGAC AGGGGAAGGT TAGTTTACAA 9540  
 GGTGAAGCAT CAGGGGATGA TGGACTTTCA GAAAAATCTT CTATAGCAGC AGACAATCTA 9600  
 TCTTCTAATG ATTCAATGCG AAGTCAAGTT GAGCAGAATC CGGATCACAA AGGAGAATCT 9660  
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 CGCGAAGAGG AAGTATTGCC GACGACAAAT GATCGACCAG AGTATAAAT TCCATTGGAA 9780  
 ACCAAAGGCA CGCAAGAACC CGGTCAAGAG GGTGAAGCCG CAGTCCGTGA AGACTTAACC 9840  
 GTCTACACTA AGCCACTAGA AACCAAGGT ACACAGGAC CCGACATGA AGGTGAAGCT 9900  
 GCAGTTCGCG AGGAAGAACC AGCTTACACA GAAACGTTAG CAACGAAAGG CACGCAAGAG 9960  
 CCAGGTCATG AGGGCAAGC TACAGTCCGC GAAGAGACTC TAGAGTACAC GGAACCGGTA 10020  
 CGGACAAAAG GCACACAAGA ACCCGAATCAT GAGGGCGAAG CGGCAGTAGA AGAAGAATCT 10080  
 CCGGCTTTAG AGGTCACTAC ACGAAATAGA ACGGAAATCC AGAATATTCC TTATACAACA 10140  
 GAAGAATTC AGGATCCAAC ACTTCTGAAA AATCGTCTGA AGATTGAAG ACAAGGGCAA 10200  
 CGAGGACAC GTACAATTCA ATATGAAGAC TACATCGTAA ATGGTAATGT CGTAAAACT 10260  
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 GTGAAAGTTA AACCTACAGT AGAAATTACA AACTTAACAA AAGTTGAGAA CAAATAATCT 10380  
 ATAACTGTAA GTTATAACTT AATAGACACT ACCTCAGCAT ATGTTTCTGC AAAAACGAA 10440  
 GTTTTCCATG GAGACAAGCT AGTTAAAGAG GTGGATATAG AAAATCCTGC CAAAGAGCAA 10500  
 GTAATATCAG GTTTAGATTA CTACACACCG TATACAGTTA AAACACACTT AACTTATAAT 10560  
 TTGGGTGAAA ATAAATGAGG AATACTGAA ACATCAACTC AAGATTCCA ATTAGAGTAT 10620  
 AAGAAATAG AGATTAAAG TATTGATTCA GTAGAATTAT ACGGTAAAG AATGATCGT 10680  
 TATCGTAGAT ATTTAAGTCT AAGTGAAGCG CCGACTGATA CGGTAATAA CTTTGTAAAA 10740  
 GTGAATCAG ATCGCTTCAA AGAAATGTAC CTACCTGTAA AATCTATTAC AGAAATACG 10800

1092

GATCGAACGT ATAAAGTGAC GGTAGCCGTT GATCAACTTG TCGAAGAAGG TACAGACGGT	10860
TACAAAGATG ATTACACATT TACTGTAGCT AAATCTAAAG CAGAGCAACC AGGAGTTTAC	10920
ACATCCTTTA AACAGCTGGT AACAGCCAGT CAAGGCAATC TGCTGTGTGT CTATACATTG	10980
GCTTCAGATA TGACCCGAGA TGAAGTGAGC TTAGGCGATA AGCAGACAAG TTATCTCACA	11040
GGTGCATTTA CAGGAGGCTT GATCGTTCT GATGGAACAA AATCGTATGC CATTATGAT	11100
TTGAAGAAAC CATTATTGA TACATTAAAT GGTGCTACAG TTAGAGATTT GATATATAA	11160
ACTGTTTCTG CTGATAGTAA AGAAAATGTC GCAGCGCTGG CGAAGGCAGC GAATAGCGCG	11220
AATATTAAATA ATGTTGCAGT AGAAGGAAAA ATCTCAGGTG CGAAATCTGT TCGCGGATTA	11280
GTAGCGAGCG CAACAAATAC AGTGATAGAA AACAGCTCGT TTACAGGAA ACTTATCGUA	11340
AATCACCAGG ACAGTAATAA AAATGATACT GGAGGAATAG TAGGTAATAT AACAGAAAT	11400
AGTTCGAGAG TTAATAAAGT TAGGGTAGAT GCCTTAACTC CTACTAATGC ACGCAATAAT	11460
AACCAACATG CTGGAGGGAT AGTAGGTAGA TTAGAAAAATG GTGCATTGAT ATCTAATTGC	11520
GTGCTACTG GAGAAATACG AAATGOTCAA GGATATTCTA GAGTCGAGG AATAOTAGGA	11580
TCTACGTGCG AAAACGGTCG AGTAAATAAT GTTGTGAGTA ACCTAGATGT TGGAGATGGT	11640
TATGTATATCA CCGGTGATCA ATACGCAGCA GCAGATGTGA AAAATGCAAG TACATCAGTT	11700
GATAATAGAA AAGCAGACAG ATTGCTTACA AAATTATCAA AAGACCAAAAT AGACGCGAAA	11760
GTGCTGATT ATGGAAATCAC AGTAACTCTT GATGATACAG GCACAAGATT AAAACGTAAT	11820
CTAAGAGAAG TTGATTATAC AAGACTAAAT AAGCAGAAAG CTGAAGAAA AGTAGCTTAT	11880
AGCAACATAG AAAAAGTAT GCCATTCTAC AATAAAGACC TAGTAGTTCA CTATGOTAAC	11940
AAAGTAGCGA CAACAGATAA ACTTTACACT ACAGAATTGT TAGATTTGT GCCGATGAAA	12000
GATGATGAAG TAGTAACGGA TATTAAATAAT AAGAAAAATT CAATAAATAA AGTTATGTTA	12060
CATTTCMAAG ATAATACAGT AGAATACCTA GATGTAACTC TCAAGAAAA CTTCATTAAC	12120
AGTCAAGTAA TCGAATACAA TGTACAGGA AAGAATATA TATTCAACAC AGAAGCATTT	12180
GTTCAGACT ATACAGCGAT AACGAATAAC GTACTAAGCG ACTTGCAAAA TGTAACACTT	12240
AACTCAGAAG CTACTAAAA AGTACTAGGA GCAGCGAATG ATGCAAGCTT AGATAACCTA	12300
TACTTAGATA GACAATTGA AGAAGTTAAA GCTAATATAG CAGAAACACT AAGAAAAGTA	12360
TTAGCGATGG ATAAATCAAT CAATACTACA GGAGACGGTG TAGTTGAATA CGTAAGTGAG	12420
AAATTCAAAA ATAACAAAGA AGCATTTATG CTAGGTCTTA CTTATATCAA CCGTTGGTAC	12480
GATATTAAAT ATGGTAAAA GAATACAAAA GATTIATCTA CGTACAAGTT TGACTTTAAC	12540
GGAAATAATG AGACTTCAAC GTTGGATACT ATTGTCGAT TAGGAAATAG TGGACTAGAT	12600

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AACCTGAGAG	CTTCAAAATAC	TOTAGGTTTA	TATGCGAATA	AACCTGCATC	GGTAAAAGGA	12660
GAAGATTCAG	TCTTTGACTT	CGTAGAAGCG	TATAGAAAAC	TGTTCTTACC	AAACAAAACA	12720
AATAACGAGT	GGTTTAAAGA	AAATACAAAG	GCAATATATAG	TCGAAATGAA	GTCTGATATT	12780
CGACAGATAC	GAGAAAACA	AGAATCACCA	ACAGCCGATA	GAAAAATATC	ATTAGGAGTT	12840
TACGATAGAA	TATCAGCACC	AAGTTGGGGG	CATAAGAGTA	TGTATTATACC	ACTACTAACT	12900
TTACCTGAAG	AATCTGTGTA	TATTTTCATCG	AATATGTCTA	CACTTGCATT	CGGTTCGTAT	12960
GAAAGATATC	GTGATAGTGT	GGATGGAGTT	ATTCCTTCAG	GAGATGCTTT	ACGAACTTAT	13020
GTAGAAAATA	GAGTTGATAT	AGCAGCGAAA	AGGCATAGAG	ACCATATAGA	TATTTGGTAC	13080
AATCTTCTTG	ACAGTGCCTC	AAAAGAAAAA	CTTTCCGTT	CTGTGATAGT	TTATGATGGA	13140
TTCAATGTAA	AAGATGAGAC	AGGAAGAACT	TATTOGGCAA	GOTTAACGGA	TAAAAACATC	13200
GGCTCTATTA	AAGAAATCTT	CGGACCTGTT	GGGAAATGGT	ATGAGTATAA	TAGTAGTGCA	13260
GGAGCGTATG	CGATGGAAG	TTTAACGCAC	TTTGTGTTAG	ATAGATTATT	AGATGCTTAT	13320
GGAACTCGG	TTTATACTCA	TGAAATGGTT	CATAATCTCT	ATTCTGCAAT	CTACTTTGAA	13380
GGAAATGGTA	GACGTGAAG	ATTGGGAGCG	GAGTTATACG	CACTTGGTTT	ACTGCATCT	13440
GTAGATAGTG	TAAATCTCTA	TATTTTAGCT	TTAAATACGT	TATATAAAGC	AGAAAAAGAT	13500
GATTTGAATA	GATTGCATAC	ATATAATCCG	GTGGAACGTT	TCGATTCGGA	TGAGGCGCTT	13560
CAAACTTATA	TGCTTGGATC	ATATGATGTA	ATGTATACAC	TTGATTCGAT	GGAAACAAAA	13620
GGCATATTAG	CTCAAAATAA	TGATGTTAAG	AAAAAATGGT	TTAGAAAAAT	AGAAAAATTAT	13680
TACGTCGTG	ATACTAGACA	TAATAAAGAT	ACACATGCAG	GAAATAAAGT	CCGTCCATTA	13740
ACAGATGAAG	AAGTAGCTAA	CTTAACATCG	TTAAACTCAT	TAATCGACAA	CGACATCATA	13800
AATAGACGTA	GCTATGATGA	TAGTAGAGAA	TATAAACGAA	ATGGCTACTA	TACTATAAGT	13860
ATGTTCTCTC	CTGTATACGC	AGCGCTAAGC	AATTCGAAAG	GTGCTCCTGG	AGATATTATG	13920
TTTAGAAAAA	TAGCTTATGA	ATTACTTGCG	GAAAAAGOTT	ATCACAAAGG	ATTCCTACCT	13980
TATGTTTCTA	ATCACTACGG	AGCAGTAGCA	TTTGGCAGCG	GAAGCAAAAC	ATTCTCATCA	14040
TGGCATGTGA	GAGATGTTGC	TTTAGTGACA	GATGATTTAG	TATTTAAGAA	AGTATTCAAT	14100
GGTGAGTACT	CATCATGGGC	TGATTTTCAA	AAAGCAATGT	TTAAACAACG	TATAGATAAA	14160
CAAGATAATC	TGAACCAAT	AACAATTCAA	TACGAATTAG	GTAATCCTAA	TAGTACAAAA	14220
GAGTAACATA	TAACACGGC	TGCACAAATG	CAACAATTAA	TTAATGAGAC	GGCTCGGAAA	14280
GATATTACTA	ATATAGATCG	TGCAACGAGT	CATACCCGAG	CAAGTTGGGT	GCAATTTATTA	14340

1094

AAACAAAAA TCTATAATGC ATATCTTCGC ACTACAGATG ACTTTAGAAA TTCTATATAT	14400
AAATAAGATT GTAGAGTTTC ATTGTTGAGT AGTCTTTCCT GTAAAGGATGA GGAGTCAGAT	14460
GACAAATCGA CTCCTTTTTC TTATGGATCG ATGTAGAGAT TTGATTGAAT GCAGATTGCA	14520
GGATCATCT TCAACTCATC AACGACCAAT GGTGACAAGT TGGATTTCAA TCCACAGAA	14580
AATGTTGATT TGAGAAATAA CTTTGCTAGT CTAGTAAAAA AAATACAAAA CAATCC7AGA	14640
AGATTTTTC TGGGATTGTT TTTTGCTGAG TGGGATGCTT CAAGTTGCTT GCGTTGACTT	14700
CTCTGAGGGA AGTTATATAA TAGTTGTAAT AATTAG	14736

## (2) INFORMATION FOR SEQ ID NO: 172:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11770 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

ACAGGAAAGC ACGATAGCAA TCTCTTTGGA AGATTTAAAA AATATTCCTC AAAGTTTCGC	60
TGTTGCTTAC GGTGATACGA AAGTATCTTC GATTCCTCTT GTCTTGCGTG CTAATTTAGT	120
AAATCATTTG ATTACAGACA AAAATACAAT TTAAAAAGTT TTGGAAGAAG ATGGGGATTT	180
GACCTTTAGA GAGATTCTAG GTGAGTGAAA ATGATAGACT GATTCAGTTT ATCGTTTTTC	240
TTTTTAGTTG ATTGCACATT TGTGCTTATA TAAACAAAAA TAGTTTATCT GTTGTTTTTG	300
GATTGACAAC TTATATTATG AGTTGTATTC TATAGTTACA AAAGAAAAAT TTAAAAATTC	360
AAATGAAAAA AGCTTTTAC ATAGTGAAAT GAGGAGGAAT TTATGGAAAT GATTGTTCCA	420
GATCAAAATA TCATGGGTTT AATTTTATAT GCTGGTGATG CGAAACAACA TATTTATAAA	480
GCCTTAGATT ACATAAAAAA TGGTACATGT GAACGGGTG AAGAAGAAAT ACAGTTAGCT	540
GATGCAGCCT TATTAGAAAC TCATAACTTA CAAACAAAAA TTTTGGCACA GGAAGCGTCT	600
GGTACAAAGA CAGAAATTAC AGCTCTCTTT GTTCATTCAC AAGATCATCT CATGACCAGT	660
ATGCGGAGA TTAAATTAAT CAAAGAAAT ATTAGTTTGA GAAAAGAACT TCATAAAAAA	720
TAACTACTGA GTATTATCAT TGTATTAAAC ATAGAGGAGG AAAACATAAT GGTGAAGAT	780
GCTTTGTTTT GTGCAGCAGG TTTTCTACT GGTATGCTTG TAAATAATAT GAUAAATGCA	840
GCGCAATCTA GTGGAGTTGA GGCAGAAATA GAGCGTTTT CTCAGTCTAA ATTAGCGGAT	900
TATGCGCCAA ATATAGATGT TGCATATTG GGTCCACAAG TTGCTTATAC ATTAGATAAA	960
TCAAAAGAAA TTTGTGATAA GTGTGATGTT CCGATAGCTG TTATTCGGAT GATGACTAT	1020

1095

GCTATGTTAG	ATGGGAAAAA	AGTATTAGAT	TTGGCCCTAT	CTTTGATTAG	TGGGTAAGAA	1080
AAGGAGATTT	ATTATGTCAA	AGATGGATGT	TCAGAAAATC	ATTGCACCGA	TGATGAAGTT	1140
TGTGAATATG	CGTGGCATT	TAGCTCTAAA	AGATGGGATG	TTAGCAATTT	TGCCATTGAC	1200
AGTAGTTGGT	AGTTTGTCT	TGATTATCGG	ACAATTGCCG	TTCGAAGGAT	TAAATAAGAG	1260
CATTGCTAGT	GTTTTTGGAG	CTAATTGGAC	AGAGCCGTTT	ATGCAAGTAT	ATTCAGGAAC	1320
TTTGTCTATT	ATGGGTCTAA	TTCTTGTGTT	TTCAATTGCC	TATCTTTATG	CTAAGAATAG	1380
CGGAGTAGAG	GCTTTACCAG	CTGGAGTTCT	ATCTGTATCT	GCATTCCTTA	TTTTGCTAAG	1440
ATCATCTTAT	ATCCCTAAAC	AAGGTGAGGC	GATTTGGGAC	GCTATTAGTA	AAGTTTGGTT	1500
TGGAGGCCAA	GGAAATTATCG	GTGCTATCAT	TATAGGTTTG	GTAGTAGGAA	GTATTTATAC	1560
CTTCTTTATA	AAGAGAAAAA	TTGTTATTAA	GATGCCAGAA	CAAGTCCAC	AAGCTATTGC	1620
CAACAGTTT	GAAGCAATGA	TTCCAGCATT	TGTAATTTTC	TTATCTCTTA	TGATTGTATA	1680
TATTTTAGCG	AAGTCATTGA	CTAATGGCGG	AACATTCATA	GAATGATT	ATTCGCTAT	1740
TCAAGTTCCG	TTGCAAGGTT	TAACGGATC	TTTGTATGGT	GCTATTGGAA	TTGCATTCTT	1800
TATATCATTT	TTGTGTGGT	TTGGTGTTC	TGGGCAATCG	GTAGTAAATG	GAGTAGTGAC	1860
AGCTCTGCTT	TTATCTAATC	TTGATGCTAA	TAAAGCTATG	TTAGCCCTCG	CTAATCTATC	1920
ATTAGAAAA	GGTGACATA	TTGTTACTCA	ACAATTTT	GATTCATTTT	TAATCTATC	1980
AGGTTCAGGG	ATTACGTTTG	GTCTTGTAGT	TGCCATGCTT	TTTGCAGCAA	AATCAAAACA	2040
ATACCAAGCC	TTAGGAAAG	TTGCAGCTTT	TCCAGCAATA	TTTAACTGTA	ATGAGCCAGT	2100
TGTATTGGGA	TTTCCGATTG	TCATGAATCC	AGTTATGTTT	GTACCTTTCA	TTCTTGTTC	2160
TGTACTTGCA	GCTGTGATAG	TATATGGAGC	TATTGCAACA	GGTTTCATGC	AGCCATTCTC	2220
AGGGTAACA	TGCTCTTGGG	GTACCCAGGC	TATTTTATCA	GGATTTTGGG	TGGGTGGATG	2280
GCAAGGAGTT	ATTACTCAGC	TGGTGATATT	AGCGATGTCT	ACATTGGTTT	ATTTTCCATT	2340
CTTTAAAGTA	CAGGATCGTT	TAGCTTACCA	AAATGAATC	AAACAATCTT	AGAGGTATTT	2400
GTGTGTTACT	GTTAAACTCA	CACATTGTGT	CTAAAAATTA	GAGAGTTAAA	ATTTTCTAG	2460
TTAAAGCTT	GAATTTTCT	ATAAAAAATG	GTATTATATT	TTCGAAAGAA	ATAAAAAAT	2520
TTTCGAAGA	AAGGTGCTTA	CGATGGTAAA	TACAGAAGTA	GCAAGAACAA	CAATCAAGAC	2580
AGAATATTTT	GGCAGCCCTA	CTGAAAGGAT	GAACAAATAT	CGAGAAGATG	TTTTAAATAA	2640
AAAACCTTAT	ATTGATGCTG	AGAGAGCAGT	TCTAGCAACA	CGCGCCTATG	AACGATACAA	2700
GGAACAACCT	AATGTCCCTAA	AACTGTGCATA	TATCTGAAA	GAATTTTGG	AAATATGAC	2760

1996

TATCTATATT GAAGAAGAT CTATGATTGC GGGAAATCAA GCCTCTTCCA ATAAAGATGC	2820
TCCTATTTTTC CCGGAATATA CGCTAGAAAT TGTCTCTAAT GAGTGGGATC TTTTGTAAAA	2880
GCGTGATGGA GATGTTTCTT ATATTACAGA AGAAACAAAA GAACAACCTTA GAAGTATTGC	2940
TCGGTTTGG GAAAAAATA ATTTACGTGC TAGAGCTGGT GCCTTATTAC CTGAAGAAGT	3000
GTCTGTTTAT ATGCAACACAG GATTCCTCGG TATGGAAGGT AAGATGAATT CTGAGATGCG	3060
TCACCTAGCA GTTAACATAT AGAAACTTTT GCAATTTGGT TTAAGAGGTT TTGAAGAGCG	3120
GGCTCGTAAA GCAAAAGTAG CTCTAGATTT AACAGATCCA GCAAGTATTG ATAAATATCA	3180
TTTTTACGAC TCTATATTTA TCGTAATCGA TGCTATTAAA GTATATGCAA AGCGCTTTGT	3240
TGCTCTTGCT AAAAGTTTAG CCGAAAATGC AAATCTTAAA CGTAAGAAAG AATTACTTGA	3300
GATTGCAGAT ATTGCTCTTA GAGTCCCATTA TGAACCGGCA ACTACTTTTG CAGAAGCTAT	3360
TCAATCAGTT TGGTTATTTC AATGTATTTT ACAAATGAAA TCTAAGGCC ACTCTCTTTC	3420
ATATGGCCGT TTTGATCAAT ATATGTATCC ATATATGAAG GCTGATTAG AAGTGGTAA	3480
AGAAACAGAA GATAGCATTT TTGAACGTCT GACAAATCTT TGGATTAAGA CAATTACAAAT	3540
TAAATAGGTT CGCAGTCAAT CACATACATT TTCTTCAGCA GGAAGTCTTT TATATCAAAA	3600
TGTTACAAAT GGTGGACAGA CTCGAGATAA GAAGGATGCT GTTAACCCAT TATCTTATTT	3660
GGTATTAAAA TCAGTTGCAC AAACCCATCT ACCGCAACCT AATCTAATCT TACGTTACCA	3720
TGCAGGTTTA GATGCTCGTT TCATGAATGA GTGTATTGAA GTGATGAAC TTGGTTTTGG	3780
TATGCCTGCA TTTAATAATG ATGAGATTAT TATTCCTTCT TTTATTGCAA AAGGAGTAT	3840
GGAGATGAT GCTTATGATT ACAGTGCCAT TGGATGTGTT GAAACGCGAG TTCCAGGGAA	3900
ATGGGCTTAT CGTTGCACAG GTATGAGTTA TATGAACTTC CCTAAGGTTT TACTTATCAC	3960
GATGAATGAT GGAMTTGATC CGGCTTCGGG TAAACGGTTT GCACCAAGCT TTGGTCTGTT	4020
TAAGGATATG AAGAATTTTT CTGAATTAGA AAATGCTTGG GATAAAAAC TAAGATATTT	4080
GACACGAATG AGTGTATTAT TTGAAAATTC TATTGATTTA TCATTGGAAC GAGAAGTTCC	4140
TGATATTCTA TGTTACGACAT TGACTGATGA TTGTATTGGT CGTGGAAAC ACCTTAAAGA	4200
AGGTGGAGCA GTATATGATT ATATATCAGG ATTGCAAGTT GGAATTGCAA ATTTGTCCGA	4260
TTCAATAGCT GCAATAAAAA AATTGGTGTG TGAGGAGGAA CGTATAAGCC CAAGTCAGCT	4320
TTGGCATGCA CTGGAACACG ATATATGCCG AGAAGAGGTT AAGGTCATTC AAGAAATGTT	4380
GATTCATGAT GCACCTAAGT ATGGTAATGA TGAATGATAT GCTGACAAAT TGGTTACTGC	4440
TGCTTATGAC ATTTATGTTG ATGAAATGCG TAAATATCTT AATACACGTT ATGGAAGAGG	4500
GCTATTGGA GGAATTCGTT ATTCAGGAAC ATCTTCTATC TCAGCCAACG TAGGGCAGGG	4560

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ACGTGGAACA	TTAGCAACTC	CAGATGGACG	CAACGGGGGT	ACACCGTTAG	CAGAGGGTTG	4620
TTCCACATCA	CATAATATGG	ATCAACACGG	CCCTACATCT	GTTTTAAAT	CTGTTTCAAA	4680
ATTACCAACA	GATGAATTCG	TAGGTGGGGT	TCTCTAAAT	CAGAAAGTAA	ATCCTCAAAC	4740
GTTTAGCCAAA	GAAGAAGATA	AATTAATACT	AATTGCTTTG	TTACGAACAT	TCTTTAATCG	4800
TTTACATGGG	TACCAATATC	AATACAATGT	TGTTTCCAGA	GAGACGGTGA	TTGACGCTCA	4860
GAAACATCCT	GAJAAACACA	GAGACTTAAT	TGTTGCTGTT	GCAGGATACT	CTGCATCTCT	4920
CANTGTCTCT	TCTAAGGCCAA	CCCAAGATGA	CATTATAGGA	CGTACTGAGC	ATACTTTGTA	4980
AAATAAAGAG	GTTCTTTTFA	TGGAATTTAT	GCTTGACACA	TTAAATTTAG	ATGAGATTAA	5040
AAAGTGCTCT	GAATTTTTCG	CGCTAGCTGG	GGTAACCTCA	AATCCCACTA	TTGCAAAAAG	5100
AGAGGGTCTCT	ATTAAATTTT	TTGAACGAAT	CAAGATGTA	AGAGAAATGA	TTGGCTCTAC	5160
ACCCCTCTATT	CATGTTTCAGG	TGATTTCTCA	AGATTTTGAA	GGCATCTTAA	AGGATGCTCA	5220
TAAATTCGA	AGACAAGCAG	GAGATGATAT	ATTTATCAAA	GTACCTGTTA	CTCCAGCTGG	5280
ATTACGTGCA	ATAAAGCGC	TAAAAAAGA	GGGCTACCAT	ATCACTGCAA	CAGCTATTTA	5340
TACAGTTATT	CAGGATTAT	TAGCTATCGA	AGCAGGACCG	GATTACCTAG	CTCCATATTA	5400
TAAATGAATG	GAAATCTGA	ACATGATTC	AAATCTGTG	ATTGCTCAAT	TAGCTCTTGC	5460
TATGTATAGA	CAGAACTCTC	CTAGTAAGAT	TTTAGCTGCA	TCCTTTAAAA	ATGTAGCACA	5520
AGTAAATAT	GCTTTAGCTG	CAGGTGCGCA	TGCTGTACA	GCAGGACCGG	ATGTTTGTGA	5580
ATCAGCTTTTC	GCCATGCCAT	CTATCCAAAA	GGCGGTTGAT	GATTTTCTTG	ACGATTGGTT	5640
TGTTATTCAA	AATAGTCGTT	CCATTTAGAT	AGAGAGGAAA	TACATATGAG	ANTTTTGTCT	5700
AGTCTCTCTA	GATATATTCA	GGGGGAAAT	GCCTTGTTTG	AAAAAGCCAA	ATCAATTTTG	5760
GATTTGGGAA	ATTGCCCTAT	TCTATTATGC	GATCAGTTGG	TTTATGATAT	TGTTGGAAAA	5820
CGATTTGAAG	ATTACCTACA	TAGGTATGGT	TTCCATATGG	TTCTGGGGCT	ATTTAATGGT	5880
GAAGCTTCTG	ACAATGAAT	CAATCGAGTT	GTTGCCCTGG	CTGAGAAAGA	AAATGTGAT	5940
AGTATTATCG	GTCTTGCTGG	GGGAAAGACG	ATTGATAGCG	CAAAAAGCTAT	TGCAGATTGG	6000
ATTGAAAGAC	CTGTTATTAT	TGCTCCAACA	ATTGCATCGA	CCGACGCCAC	TGTATCTGCT	6060
TTATCTGTTA	TTTATACAGA	TGAAGGTGCA	TTTGATCATT	ATCTATTTTA	TTCTAAAAAT	6120
CCAGATTTAG	TTTGGTTGA	TACAAAAGTT	ATTTCAACAG	CCCTTAAGCG	TTTATTAGCG	6180
TCTGATATTG	CAGATGCTTT	AGCAACTTGG	GTTGAGGCGC	GTGCGGTTAT	GCAGGCAAAAT	6240
GGAAAACTA	TGTTGGGACA	ACAGCAAAACA	TTGGCTGGAG	TTGCCATTGC	GAAGAAATGT	6300



1098		
GAAGAAACGC TGTTTGCAGA TGGTTTACAG GCTATGGCAG CTTGTGAAGC TAAAGTGGTG	6360	
ACACCAGCAT TAGAAAAATAT TGTGTAAAGT AATACTTTAT TGAGTGGTCT AGGTTTTGAA	6420	
AGTGAGGAT TAGCTGGGC GCATGCAATT CATATGCTT TTAAGTGCAT GACAGGTGAC	6480	
ATTCAATCATT TAACACATGG TGA AAAAGTA GCTTATGCAA CTTTAGTACA ACTATTATTG	6540	
GAAAAATGAC CTAAGAAGA ACTGTATAG TATTATTAGT TTTACAAAAA AATTGGTATG	6600	
CCAACAATC TAAAAAGAAAT GCATTTGGAT CAAGTTGGAT ATGATGATTT AATAAAAGTT	6660	
GGTAAACAAG CAACATATGGA GGGTGAGACA ATTCATCAGA TGCCGTTTAA GATTTCCGCT	6720	
TCAGATGTTG CTCGAAGCTAT TATCGCTGTA GATGCCATATG TAAATTCAAA ATAAACAATA	6780	
AGGACTACTG TTTTCCAAAT GGTAGTCTTT TATTGATCCC TGTATTGAAT TCTATAGAAG	6840	
ATTGAAATAG GATGAGAACA AATCGATTGG GAAAGTAAAA TTAATTTCTA TAAATGTTTT	6900	
AGCAATTGTT TCGTACTATT TCAGATTGAG TCTACTATAT GTTCTTCATA AATCAAAAAG	6960	
CGACATAGAT TGTCGGCTAT TTATTGTGAA TACATTAAT AGCATTCAG TTTTATCTTC	7020	
GGCTAAAAAT AAGTATTTTG TGCTATACGA GATAAGCTTC TTGACTTACT CCTTGATTTA	7080	
CTGCATAACA ATGGGATAAA AAGTGGGAGA TAGAGCAATT CATAGTCATC AAAATTAATG	7140	
AGATACAGTA TACAGTTTTT CCTTTAAACA CATTTCAAAT TCCTCAAAA ATGTATATAAT	7200	
AGTAACATCA CAAAATTGGA GAGAGACCAT GAGTTTTTAC AATCATAAAG AAMTTGAGCC	7260	
TAAGTGGCAG GGCTACTGGG CAGAACATCA TACATTTAAG ACAGGAACAG ATACATCAAA	7320	
ACCTAAGTTT TATGGGCTTG ATATGTTCCC TTATCGTCT GGAGCTGGTC TGCACGTAGG	7380	
ACACCCAGAA GGTATATCTG CAACCGATAT CCTCAGTCGT TACAAAAGTG CGCAAGGCTA	7440	
CAATGCTCTT CACCCAATGG GTTGGGATGC TTTTGGTTTG CCTGCAGAGC AATACGCTAT	7500	
GGTACTGGT AATGACCCAG CAGAAATTTAC AGCGGAAAAC ATTGCCAAT TCMAACGTCA	7560	
AATTAAATCG CTTGATTTT CTTATGACTG GGATCGTGAA GTCAACAAA CAGATCCAAA	7620	
CTACTACAAG TGGACTCAAT GGAATTTTAC CAAGCTTTAC AAAAAAGGCT TGGCCTATCA	7680	
AGCTGAAGTG CCAGTAAATC GGGTTGAGGA ATTTGGAACT GCCATTGCCA ATGAAGAAGT	7740	
GCTTCTTGAC GGAACCTCTG AGCGTGGAGG CTATCCAGTT GTCCGCAAC CAATGCACCA	7800	
ATGAGTACTC AAAATCAGG CTTACGCAGA GCGCTTGCTC AATGACTTAG ATGAACTAGA	7860	
TTGGTCAGAG TCTATCAAGG ATATGCACAG CAACTGGATT GGTAAATCAA CTGGTGCCAA	7920	
TGTAACTTTT AAAGTAAAG GAACAGACAA GGAATTTTACA GTCTTTTACTA CTCCTCCGGA	7980	
CACACTTTTC GGTGCGACTT TCAGTGCTTT GGTCTCTGAA CATGAATTAG TAGACGCTAT	8040	
CACAAAGTCA GAGCAAGCAG AAGCTGTAGC AGACTATAAA CACCAAGCCA GCCTTAAAGT	8100	

1099

TGACTTGCGT CGTACAGACC TTGCTAAAGA AAAAAACAGGG GTTTGGACTG GTGCTTATGC	8160
CATCAACCCCT GTCAATGGTA AGGAAATGCC AATCTGGATT GCAGACTATG TCCTTGCTAG	8220
TTATGGAACA GGTGCGGTTA TGGCTGTGCC TGCCCAAGAC CAACGTGACT GGGAAATTTGC	8280
CAACAATTTT GACCTTCCAA TCGTCGAAGT ACTTGAAGGT GGAATGTCC AAGAAGCTGC	8340
CTACACAGAG GATGCGCTGC ATGTCAATTC AGACTTCCCTA GATGGATTGA ACAGAAGA	8400
CGCTATTGCC AAGATTGTGG CTGGTTGGA AGAAAAAGGC TGTGGTCAGG AGAAGGTTAC	8460
CTACCGTCTC CGCGACTGGC TCTTTAGCCG TCACCGTTAC TGGGGTGAGC CAATTCCTAT	8520
CATTCAATGG CAAGATGGAA CTTCACACGC TGTTCCTGAA ACTGAATTGC CGCTTGTCTT	8580
GCCTGTAACC AAGGATATCC GTCCCTCAGG TACTCGTGAA ACTCCACTAG CTAACCTTAC	8640
AGATTGGCTT GAAGTGACTC GTGAAGATGG TGTCAAGGT CGTCGTGAAA CCAACACTAT	8700
GCCACAAATG GCTGGTTCAA GCTGGTACTA CCTCCGCTAT ATTGACCCGC ACAATACTGA	8760
GAAATTGGCT GATGAGGACC TCCTCAAAAC ATGGTTGCCA GTAGATAATCT ACGTGGGTGG	8820
TGCGGAACAT GCTGTACTTC ACTTGTCTTA TGCTCGTTTC TGGCATAAAT TCCTCTATGA	8880
CCTCGGTGTT GTTCCGACTA AGGAACCATT CCAAAAACCT TTTAACCAGG GGATGATTTT	8940
GGGAACAAGC TACCGTGACC ACCGTGGTGC TCTTGTGCA ACCGACAAGG TTGAAAAACG	9000
TGATGTTCC TTCTTCCATG TAGAAACAGG GGAAGAGTTG GAGCAAGCGC CAGCCAAGAT	9060
GTCTAAATCG CTCAAGAACG TTGTTAACCC AGACGATGTG GTGGAACAAAT ACGTGCCTGA	9120
TACCCCTCGT GTTTATGAAA TGTTTATGGG ACCACTCGAT GCTTCGATTG CTTGTCAGA	9180
AGAAGGTTTG GAAGGAAGCC GTAAGTTCCT TGACCGAGTT TACCGTTTGA TTACAAGTAA	9240
AGAAATCCTT CGGAAAACA ATGGTGTCTT TGACAGGTT TACAACGAAA CAGTCAAAAGC	9300
TGTTACTGAG CAAATTGAGT CTCCTCAATT CAACACAGCT ATTGCCCAAC TTATGGTCTT	9360
TGTCAATGCT GCTAACAGG AAGATAAGCT TTATGTGTAC TATGCCAAGG GCTTTATTCA	9420
ATTGATTGCA CCATTTGAC CTACTTGGC AGAAGAAGT TCGCAAAAG TCGCAGAAAC	9480
AGGTGAGTCA ATCTCTTATG TAGCTTGGCC AACTTGGGC GAAAGCAAT TGGTTGAAGA	9540
TGAATTTGAA ATTGTCTGCC AAATCAAGG AAAAGTTGCT GCCAACTCA TGGTTGCTAA	9600
AGATCTATCA CGTGAAGAA TACAAGAAAT CGCTTTAGCT GATGAAAAAG TCAAGCAGA	9660
AATTGACGGT AAGGAATCG TGAAAGTAAT TGCGGTACCG AATAAACTCG TTAATATCGT	9720
CGTTAAATPA CGAGTTTATT AGCTCTATCT GCCACCTTCA ATAGTCCAAT GGACTATTGA	9780
AsCCAACATA ATTAGTTAAC ATTGTTGTGA AATAAGATAG GAGTCCTTCA GAGTAGAATC	9840

1100

TGGAGGATTT TTTGAATCTT CTTATGAAAG TATGATATAC TATGGGCAAC TATAAAGTTT	9900
GAAAAGTGAA ATAAGGAGAA TAAGATGCCA GTAAATGAAT ATGTCATAAT GATTGGGGAG	9960
TCAATGSAAG CTTATACTCC AGGTGAATTG CCTCTTTTG ATTCTTAGA AGGGCGTTAT	10020
GCTAGGATAG AGGCTCTTTC AGTGGAAAAG CATGCGGAGG ATTATTTAGC TGTTTATGCG	10080
CCTGATACGC CTCGGGAGAT GTGGACCTAC CTCCTTCAG AGTCAGTAGC AGACATGGAG	10140
GAATCGTCA GCCTTTTAAA TCAGATGTTG GCTCGTAAGG ACCGTTTTTA TTATGCAATC	10200
ATAGACAAGG CAACGTGTA GGCTTTGGGA ACTTTTTCCC TCATGCGAAT TGATCAGAAT	10260
AACCGAGTAA TAGAAGTGG AGCTGTCACT TTTTCTCCAG AGCTCAGGG GACACGATA	10320
GGAACAGTAG CCCAGTATCT CTTGCTTGC TATGCTTTG AGGAGCTTAA CTATCGTCGC	10380
TATGAGTGA AATGCGATGC TCTTAACCTG CCATCCAGAC GAGCAGCGA ACGTTTGGGA	10440
TTTATTTATG AAGGAACCTT CCGTCAGGCA GTGGTTTATA AGGGCGGTAC AAGAGATAG	10500
GATTGGTTGT CTATGATTGA TAAAGACTGG CCTCAAGTCA AAGCTCGATT GGAATATGG	10560
TTGCTCTCTG AAAACTTTGA TAAAAATGGA CGACAGCACA AGAGCTTGAG AGAACTTTAA	10620
GAGGTGTGA GATGATTAAT ATTAATAAGC AAAAAATTGT CAAGCTAGAG GATGTTTTC	10680
ATCTCTATCA GCGTGTGGT TGGACAACT ATACCATCA AACAGAGTG CTGGAGCAGG	10740
CCTTATCTCA TTCAATAGTA ATTTATCTGG CACTTGATGG TGATGCTGTG GTGGGCTTGA	10800
TTGTTTGTGT TGGAGATGTT TTTTCATCAG TTTTGTACA GATTGTGATT GTTTGCCTA	10860
GCTATCAGCG TCAAGGGATT GGTAGCTCCT TGATGAAAG GGCTTTAGGA AATTTTAAAG	10920
AGGCTATCA AGTCCAGCTG GCGACAGAAG AGACAGAAAA AAACGTGGGA TTTTATCGTT	10980
CTATGGGCTT TGAATCTTA TCCACCTATG ACTGTACAG AATGATTTGG ATAAACAGAG	11040
AAAAATAAAA AAACTTGTTT GTTCTTAAGC AAAGTTTAAG GATGGTCTAG TATCATATAG	11100
TCATTAAATA AAGACTCCTT AACTTTATTT AATAAAATCC TAAACTTTTT TCATCACAAT	11160
CTCTTAATGA AGCCACCCAA TCAGGTGGCT TTTTTCGGT ACGACGGCA TGTGATATAT	11220
CTGAGGTGTA AGTCTCAGC CTGACTATCG TGAGGTAGCA GGGAGAGGAA GGGATACCGA	11280
AATCGTGCTT CTACGAACAG GAACGTGATA GTAAGCGTA TATAGCGGAT MGGAGGCTT	11340
CAAACTCTAA AGTCCAAAA GGTATGCTGA ACCTATATGT GTAAATCACG AGAGTAATAG	11400
AATTCGACT AAGGTTTGTG TGAATAAGAT AAATCTTTCT AGAGTCTAAA GACTCTCGCT	11460
CAGATTTCCT ATTTTCACTG TAACTTTTAA ACGTCTCAT ATCTTGATA AACGAGGAAA	11520
GATGTACGAC TTATCCGCTG AGGTTTCAAG AGGCTGAAA GCGTAGTAAC AACGAATCAT	11580
GAGAAATCAG CCGAGCCCAT AGTAGTGAGG AAACCTTCGT AATGGAAGTG GAGCGAAGGG	11640

1101

GTGAATACTC AAACAGTCTG GGGAGAGACT GTTTGAGGTC TGTCGCTAGA AAGAGAAAAC 11700  
 GACAGATCGA AGTAATCCTA CTTCACTTGT GTCTGTAAAA TGACTGGTCT GATAGAACTG 11760  
 GACTTTGAGG 11770

(2) INFORMATION FOR SEQ ID NO: 173:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4185 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

CGCGAAACTA CTTTCTTAGT ATAACTTT CAGAACTATT GTCAATGAA ATGACTTGAT 60  
 TTTTCAATT TTTTCAAGCT ATTTCCAAGG GTTGTAATAT CGTCCCTGAT TCTGCAAGAT 120  
 AAGTAGTAAA CTAACACTA AAAACAAGGT TGCCAAGAGC AAGGTAAATAT AGTCTCCTTT 180  
 TTTCAAGGCC TGATAACTAT ACCATGTGCG TTTTCTCTCT TTCCCAAAGC GGCGAACTCC 240  
 ATGGCAGTCG CAATGGTATC AATGCGTTCT AGCGAGCTAA AAATCAAGGG CGTAATAATG 300  
 AGCAGATTGC CTTTGATTCT TTGCATAAGA GAAGCTTTCT TGGATAATTC CATCCCAAGC 360  
 GCCTCCTGAG ACATCTTGAT AGTAAAGAT TCTTCCTGCA AATCTGGAAT ATAGCGCAAG 420  
 GTCAAGGCTGA CAGAAATAGC AATCTTAATAG GGCACACCAA TTTGATTTAA ACTGGAAGCA 480  
 AACTGACTAG GATGGGTTGT CATCAAAAAG ATAATAGCCA GAGGAATGGT GCAAAGATAC 540  
 TTAATGGCCA AATTTAGCAG ATAAAAGAGC TCCTGGCTGG TTAGAGTGTA GACACCGATT 600  
 CCTGCCAAA TCACACTTCT CTCTCCATAA AGTCCAACCC CATACTCGGG AGAAAAGAGA 660  
 TAGACCATCA AAACGTTTAA AACGGCAAT ATCGTCGCAA AAACGGCTAC AAAGGAAACA 720  
 TCTTTAAAGC GAATTTCTGA TAAATAGAGG AGAAAGACTG AAAAGATGGC AATCAGCAAG 780  
 AGCATCTGG TATCATAGCT AATCATGGCC GCCAATGATA CCAGAAATGAA AAAGAGAAGT 840  
 TTCCAGCTC CTGACAAGCG ATGAATCACA GTATCTCTAT GCTGGTAACC GATTAATTTA 900  
 GCTTGATACC CTCTCTCCTT TCTTTGTAAA ATGCCGTTAA ATCCAGTGA TCCACATCTA 960  
 GTTTCTTAGC CAAGTTAAG ATGGAAGTTT CTTTGAATTT GGCTTTTACT AACAGCTCAG 1020  
 GATCGTCAA CAGACTGGCT GGAAAGATAT CGGCAATCAA TTTCCTCATC ACCATGACAA 1080  
 GGACCCGGCT TGAATAATCC AGCA7CAATT GCATATCATG GGTAAATCAT ACAAATGATAT 1140  
 GCCCTTTTGT ATGTAACCTC TCGAGAAATT CCA7AATCTC AGTATAGTTC TTCTGATCTT 1200

1192						
GACCTGCAGT	CGGTTTCATCT	AGGAGAATAA	TTTTCAGCTCC	TAAGACCAA	ATTGAAGCAA	1260
TGGTGACACG	TTTTTTCTGA	CCAAATGACA	GGGCAGAAAT	AGGCCAATTA	CGGAATTCAT	1320
AAAGTCCACA	GATTTTCAAG	GTTCATATATA	CTCTCGTTTC	AATTTCTCTC	TCATCCACAC	1380
CTCGCAAACG	GAGCCCTAGA	GCCACCTCAT	CAAAAATCAT	ATTGGTTGAA	ATCATTTGAT	1440
TAGGATTTTG	TAGCACATAT	CCTACTCGTT	CGGCCCGCTC	TGCAACAGAA	TGCGCTTTTA	1500
TATCCTGTTT	TTCCCAAGA	TAGCGTCCTT	CCGTCTGAAT	AAAGCTACTT	ATAGCCTTGG	1560
CTAGAGTTGA	TTTCCCTGCT	CCATTTTTTC	CGACAATAGC	AATCTTTTCA	CCCTTTTTAA	1620
TATCTAAATG	TAGGGATTTT	AAAATCGGTC	TATTCATATA	AGAAAAGAT	ACTTCTCTTA	1680
GTCTAAAGAG	TGACTGCAAT	GCTGGGGTTT	CTTTTGCCAG	TTCAATTCTG	AACTGAACCT	1740
GACCTTTTGA	GATAGACAAG	TTATCCAGAT	TGCTTAATTG	TTCTTCCTTG	ACTAAGTCCA	1800
CACCTAATTG	ACGGAGAGTC	GTTAGATAAA	GGGGTTCTCG	AATTCACATT	TGAGTCAATA	1860
AATCAGTCGC	AAGCAACTGG	TCAGGGCTCC	CATTAAAAAG	GATACGACCA	TCGTTTATCA	1920
AGACAATCCG	ATCCACAGGG	CGATGCAGAA	CGTCTCCAA	ACGGTGTCTG	ATAATAAGAG	1980
TCGTGCTCCC	CTCTTCCCTTA	TGAATCTTGT	CAATCAATTC	GATAATATCC	TGACCTGACT	2040
TGGAGCTAG	ATTGGCGAGT	GGCTCATCAA	ACAAGAGAAT	CGACTTTTCA	TCAATCAAGA	2100
CACCAGCCAG	ACTGACTCGC	TGCTTTTGTC	CACCTGACAA	ATCCTGAGGA	CGCTGATCCA	2160
GTAAAGCAAG	AAGGTCCAGC	TTTTCAGCCC	ATTTATAAAC	ACGACCTTTC	ATCTCATCTA	2220
GGGCTGTAC	ATCATTTTCC	AGAGCAAAAG	CCAAATCTTC	TGCCACAGAC	AAGCCAATAA	2280
ACTGCCCATC	TGTATCCTGC	AAAACGTGTC	TAACCAAGTG	AGACTTATCA	TAGATGCTCA	2340
TATCAAAAGC	TACTTGACCC	TTTATCAAAA	ATTTCTCATA	TGCTGACCC	TTGTAAATAT	2400
TGGGAATAAT	CCCATTCAAA	CACTGACCCA	AGGTAGATTT	ACCTGACCCA	GATGGTCCAA	2460
CAATTAAGAC	TTTCTCTCCC	TTGTAAATGG	TCAAGTCTAT	CCCTTGCAAG	GTGCGTTCTT	2520
GTGTGTGTTT	ATACCGGAAA	GAGAAATCCT	TCCACTCAAT	TaTAGCTTCT	TTGATCTTAC	2580
TCTCTTCATT	CGCTTCTTAG	ACTTCTATTT	TATCATAAAT	CAAGCCCTTC	TGCGAGTCTC	2640
TCCTCTTAAA	ATCTTAGCGC	CAAAAAGATT	CCATCTCTAG	CTTACTTGCC	TAACATATCT	2700
ATAAACATCG	AAAAAGACTA	GTTCGCCACG	CTTCCCCTAC	ATTTTATACT	CTTCGAAAAAT	2760
CTCTTCAJAC	CACGTCAgCT	TCGCCCTGCC	GTAGGTATGG	TTACTGACTC	CGTCAGTTTC	2820
ATCTACAACC	TCAAAACCAT	GTTTTGAGCC	TGCTTTCOTCA	GTTCATATCCA	CAATCTCAAA	2880
ACACTGTTTT	GAGCAACTGC	GGCTAGCTTC	CTAGTTTGCT	CTTTGATTTT	CATTGAGTAT	2940
TAGTCCTTTT	TCAAACTTCC	TGCACGAGTT	TGGTTTCTGT	CATAGGCAAG	TAAGAGAAGA	3000

1103

GTTCCTGCAA TAGCTACAGA TACACCAATTG GCAATTCCCG CAACAATCCC TTGTGCAAAAT 3060  
 ACTTTTCTGT CCGCTTCTTG ATAAATCACA ACATCTCCAA GTGGTGCCAA GACACCCCAA 3120  
 ACAAGGGCAT TTGCAAGTAG TTGAATGAGA TTAATAATAA GAATATCTTT CCAGTCAAAA 3180  
 ACACCAATTGA TCACGCGAAC GTACTTTCTA AAAAGTCCCA CAACTAAACC AAGAGTCCG 3240  
 CTAGCGATAA TCCAAGTCCA CCATAGACCA TAACCAACAA GAGAGTCCTT GATTGCAATGA 3300  
 CCAATCAACC CGACAAGCAA ACCGATAATC GTTCCAAAAA TAATAGAAAG TAGCGCTTGT 3360  
 ACCGCACTACT GAAGCTGGAT GCTTGTATTT GGAACAGGGG TTGGAATGTT GATCATCCCG 3420  
 ATGACGACAA AGAGGGCAGC GCCAATCCG ACAGCAACAA CTGTTTAAT TGTAAATTTG 3480  
 ATTTCCATAC TATTCTCCTA TTTTATCCTT CTATTTTCTT TATTTCNAATG GTCCAAGATG 3540  
 AACCAGACCC TACATTATAG GCCTTGGCAA AGGAACCTTG GTTGATAGCC AAACCTAAAC 3600  
 GATAGAGAGA GTTGATGTAA AGGATGGGTT GCCCAATTCT CACATCTGCA AATGATTTGC 3660  
 CATAGACAA CTAATTGTA TAGACGAGCA TATCAGCATG ATAGATGGTC ACTTCAAAAC 3720  
 GATCACCAAA TTCTGGTTCC AGCTTGTAAG ATCTCTCCCG TGTGATAGAG GTCCAAAGCG 3780  
 AACCGAAACG CACATCCAGA ATATCAATGG CTCCTTTCAC CAGATGATCT TCTATGATGG 3840  
 TCGCTACGAC TGGAGCTCT ACAATCTGTT CCACATGAG CTCTGGCCCT ACTTCTCTCA 3900  
 AAGTAATGTG ACCACTGGCC AGTTTAGCAC CAGTATAGGC ATAGACATCA CGACCGTGGA 3960  
 AGGTATAAGA ATGCTCTGTG TTTTGACGCC TATTGGCCAC CTCAGAAATC TCACGAATGG 4020  
 CTACAATGCC AACGTGTTT TTGATAAAGG AAAGCGTCCC ATTATCTGGC GTGACAATGT 4080  
 ATTGATTTTT TGCAGTCTTG GCAACTACAC TCTTAGCTTT CGAACGACA CCTGGATCGA 4140  
 CAACCGATAC AAACGTCTGT CCCTCAGGCC AGTAATCCAC CGCTC 4185

(2) INFORMATION FOR SEQ ID NO: 174:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2069 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

TGATAGAGTT AAAGCCGCTG AGTCATTCAA TCCATCTCCA ACCATCAAAA TAGTGTGACC 60  
 TGCCTTCTGC AGTTTCTCTA CTAACCTAAA TTTCACATCA GGTTCGAAGT CTGTATAGAC 120  
 CTGATCAAAG GGCAAACTTT TGACTAATTC CTCTGTCTTA ATCAAGGTGT CTCCTGTTCG 180

1104		
CAGAAATCAAT TTTTCCCT GTGCCCTAAG TTTATCCAAG GCTGTTTTTG CTCTTTTCT	240	
CAGAGGAGTA TGAATGCAGA ACATTCACAT CAATTCATTT TGAATAAGCA AGAATAAGAG	300	
ATTGTAGTGA CTCTGTGACT CTTCATTAAT AGCATTTTCT TCTGAACCTGA TATGAATCTG	360	
CTCATCTCGC ATCAAGACAT AATTCACAT AGAAGCTGGT TGCCACTCTA TATGAGATTT	420	
GATCCCTCTG CTTCGATAT ATTGGAGTTT CCGATGCATT TCCTCATGPT CAATTCCTTC	480	
TATCTCACCCT TGCTTGACGA TGGCATTAGC AATAGGATGA TAAATGTGTT CCTCAAGACA	540	
GGCACTGATT CTGAGAATAT CTTCCTCACT ATAGTCTCCA AAGGTAAACA CCTTTTCAAC	600	
TATAGGATAA CTAGTTGTGA TTGTTCTCTG CTTCATCAAC AAGAAAGTAT CAATTCACAG	660	
ATATTTCTCC AGAACATCTC CATCTTAAT CACCATTTCA CGGTTCACCC CTTCCTTGAT	720	
AACCTGTCAA TAAGCTACAG GAGTAGAGAT TTTCAAAGCG CAGGAGAAAT CGACCAATAG	780	
GAAAGAAATA GCCTTAGAAA AAGAACCTGT CAATAGGTAA GTGAGCCAG CCCCCAAGAA	840	
ATTATATTAG ACGACTTAT CGGCCATCTT GATGAATAG CGTTGTTTCG TTTTCTTGTT	900	
TTCTTCAGAT TTCTTCATCA ACTCAATCAG CTGTAAATA CGGCTGTTCA TCTGATTATC	960	
TGTTACACGA ATGCGTAAT CTCCAGTTTC TAATACTGTA TTTGCACAAA CCAATACAGA	1020	
CTCTCTTTTT TCAACTGAAA AACTCTCTCC TGTCAAGGAA CTTTCGTTGA CCAATACATA	1080	
ACCTGAAACT ACTTGTCCAT CAAACAGAA TTTCAATTCCT TGAGATAAGA TCAAGACATC	1140	
TCCTATTGGA ACATCGGAAC TCTTGATACT AACCAACCTA TCGCCCTGTA CTAGGAATAC	1200	
ATCGCTCTCT TTTGCAAGAA GACTCTGTTT TAAATCTGTT GCAGTTTTTT TCAAGGACCA	1260	
CTGATCTAAA TGATTCCCCA AATCAAGCAT AAACATGATA TTGCTAGCTG TCTTGGATTG	1320	
GTTCATAAAC AAGACAATA AATAGCCGA ACAGTCCAAG ACTTCACATG TTAGTCTCTT	1380	
ACGCGCTAGT GTTTGATAGG CTCTCTAAT ATAACCCAAA GCCTGATAAC AGTCCATAT	1440	
ATAGCGAATA GGATACGCA CAAACTACG AAAAAGTACA CGCTTACCG CTGCACCTGA	1500	
AACAATAGAA TAAGCACTCT CTCTCTACG AATGGGAAGA GTCATCAACT CAGAAACTTT	1560	
CCCTTTATCA ATTCTTTTTT AAAAGGCTTC TGCATTATCT AATACAGAAA AGCCTTCTTT	1620	
TATGCGTAGA GTAAAGTCT GTTGATCCAT GTAAAACCTG ATAGACTCAA TCCCTTTTTC	1680	
ATCTCTGCC AAGGAACGAA GATAGTCTTG AATATCCAAG GTAAGTAAA AAGAAGATTG	1740	
TAGTCGATA TGTGTGATC CTCTATGTAG CACTTTAAAA GACATATAT TCACCTATAA	1800	
GGCTATCTAA TTGCTCTCTT TTTTCTCTT GCTCGTACAA ATATTTGGCA TCTTGCAAGA	1860	
CATCGTCTCC ATGTTGCTTC ACAACAGAAA CAGATGCATC TAGCTCGTCT TTCAACTTGT	1920	
AAGCCTTAGC CAAAGCTTAA GAATAACCTT TTTTAGCTTC CTACTTGCT AAGATTTTCA	1980	

1105

AACCAAGGGT ACCAAATGCG ACACCACCCA AAAATAATGA AGATTTTTTC GCAACTTTTG 2040  
CAACGGTTAA TACTTCTTTT AACATAGGG 2069

(2) INFORMATION FOR SEQ ID NO: 175:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 4597 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

AAATCTTGGG CAATAAAGCT CATCTCCATC TCCGATGA AACAGTCACT CCCCGGACTG 60  
TTTCAACGTC CCAGACATA ATCTTAGGCA GATTTCATAA ATTACACTCA AAGTGGAAAT 120  
CATTGAGCTT TCGAATGACA GTTGAAAGTTG AAATGCCAG CTGATGGCA ATATCGGTCA 180  
TAGAAATCTT TTCAATTAACT TTTTGCGCAA TCTTTTGGTT GATAATACGA GGAATTTGGT 240  
GATTTTCTT GACGATAGAA GTTTCAGCGA CCATCATTTT CAAGCAATGA TAGCACTTAA 300  
AACGACGTTT TCTAAGGAGA ATCTTAGTAG GCATACCAAT CGTTTCAAGG TAAGGAATTT 360  
TATAGGGTCT TTAATGTCTA GTAAATTTGT GATAAAATGT AATTGTTCCA TAGGATTCCT 420  
TCTAATGAGT TGTTTGTGCG CTTTTCATTA TAGATCTTAT GGGACTTTTT TTCTACCCAA 480  
AATAGGCTCC ATATATCCA TAGGGATTT ACCCACTACA AATATTTATAG AGCCCAAGT 540  
TTTAGGTGCG TTGATAATAT GCGTTTPTTG AATTTTATAG ACTGCTCGTT TAAACTCTAT 600  
TTACTTCGTA CCTTCTGGAG CGAGACGGAA TATTAGTCAC ATACAAATG AGTACTATTA 660  
GGATTTTATF TTCAATGACA ATTTACGCCA GTCTGTTAT AATCAGCCTA TAGGAATCAA 720  
GGAGTGACT CTTATGGCTG TTTTGTGTC TTGGATGGA ATGTGGTAG AAGTCCTTGA 780  
TGCTTTTCT TCTTTTAAAG GGGATAGTGA GTTTTCTTG TGTATAGCAT TTGATCTCG 840  
GAATAGGACG CCATGACTGC TAAAAGATTT CTATAAATTA ATTTGATTTT CCTAATCAAT 900  
TTGTTCAATAT CTTATTTTAT TCCACTATAA ACCTCTTAAA GACAAGAGTC AGTTTGTAT 960  
GGAACGCTCT CAGTTGAGG AGATGTTCCA ACTTCAAAGT AGTCGCTTGA CGACGCAACA 1020  
AAATATCAA TTGTTTACCT CTGTGTTGCG TGGCGTTAT GATGTTTAT CTAGAATTT 1080  
TATCAATGAA CAAGGAAAA TTCAATATTT TCCTTCTAT GATTATGGTT GGAAGCAGTT 1140  
GCCACCTGAA AAACGGAGTT TCCAGACATT GACGAACCTC GTTTTGAAT CTCATTTTTCG 1200  
TGGGAGGCA GCATACGTA TCTTTCCTAT GCACCTAGAT GATAGCTGTT ATTTTITGGT 1260



1106	
ACTGGATTTG GATGAAGGAG ATTGGAAAGA AGCTGGTTTA ACCATTCGAA GAATAGCCAG	1320
GGAACGCCAG ATGGAAGCCC ATTTAGAGAT TTCTCCTTCG GGTCACGGAC TCCATATTTG	1380
GTCTTCTTTT GAGGAAGCGA TTCCGAGTCG AGAGCGCTCG TTGTTTGGAA AGAAACTGAT	1440
AGAATCGCA ATGCAGGAAA GTATGCAACT GTCCPTTGAT TCTTTTGATC GCATGTTTCC	1500
AAATCAGGAT GTCTTCTCTA AGGGGGGATT TCGAAATTG ATTGCCTTGC CTTTTCAGG	1560
AGAAGCTTAC CATCAAGGGC GAACGGTCTT TGTGGATGAA CAGTTTCAGC CTTATGAAGA	1620
CCAAATGGAG TATCTACAG AAATTCAGAG GATTTCACAT CCTAAAGTGG CACTGTTAAT	1680
CCAAGAGGAG TTAGGCAAGC AAGAATTGGA TAAGGAGTTG AAGGTGCTTT TATCCAATAT	1740
GATCCAACCTT GAAAAATCGT CTGTGACATC CAAGGCACCT TTTTCTTGAA AAATATGGCT	1800
TCTTTTCTTA ATCCCGAATT TTATAGTAGA TTGAAACTAG AATAGTACAC CTCTGCTTCT	1860
AAACATTTGT TAGAAATCGA TTGACTTTTC CTGATCGATT TGTCTGTGTA TTATTTCAAT	1920
TTATCTATAT TAAAGCAGCG TATGCGACAG CCAACCTATC AAATTCCTGA GAGAAATGAT	1980
TTATTGGAG AATCGATCA TTATTTATGG TTGCCAAGAG GTTTGCTGTA TCCATPGCAA	2040
GATAAATTTA AGCAGGTATC TGTGGAAGAT AGGAGAAAGG TACAAAGGTC TATTAGCGTG	2100
GAAATTAAGG GAGAACTCAC TTTTGAGCAA GAGTTAGCCC TGTGAGATAT GACTTCTAAA	2160
GAAAAATGTT TACTTTCATG GAGACTGGT TTTGGGAAGA CCGTTTTAGG TGCTGCTCTT	2220
ATCTCTGAAC GGAAAAAATA AACAAATATT CTAGTCCATA ATAAGCAACT CTTAGACCAA	2280
TGGCTAGATC GCTTAACTG CTTTTGACT TTGCAAGAG AGGAGGCTAT CCGTTATACG	2340
GCATCAGGTC GTGAAAAGGT AATCGGCTAT GTTGGGAGT ACGGTGGGAC TAAGAAATGG	2400
CTGAGTAAC TGTTTGATGT CGTTATGATT CAATCTCTAT TTAAGTTGGA AAATAGTCAA	2460
AGTCTTTTGG ATGAGTATGA GATGATGATT GTGGATGAGT GTCATCATGT CTCTGCCTTG	2520
ATGTTTGAAA AAGTTGTGTC TCAGTTTAGA GGAAGATAT TTTACGGTTT GACGGCTACG	2580
CCTGAGCGTA AGAATGCTCA TGAGCCTATT GTTTTTCAGA GAATTGGTGA GATACTCCA	2640
ACTGCTGATA AGAGGGAAAC GGATTTTAAA CGGCAATTGC AATTAAAGTT CACTTCTTTT	2700
GGTCATTGAG AAATTGAAAA GACCAAGCA AGTAATTTTA TACAGCTTAG TGATTGGATT	2760
GCTACTGACT CAGTGAAGAA TCAGATGATT CTCAGGATA TTCTAGCCCA AGTGGCAGAA	2820
GGACGGAATA TCTTGGTTTT AGTTAATCGA ATTCAACAGA TAGATGCTTT TGA AAAAATTA	2880
TTGAAAGAGA AAGAGGTTGA TGACTGTAC ATTATTAGCG GAAAAACCA AGTCCGAGAG	2940
AGAACGAGTT TACTGGAGAC GTTAGAACAG TTAGATAAAG GGTTTGTTTT GTTGCTACT	3000
GGAAAAATACA TTGGCGAAGG TTTTGACTTA CCTCAGTTGG ACACGCTTAT CTTGCCAGCA	3060

1107

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CCCTTTCTTT GGAAAAATAA TTTGATTGAG TATGACAGGT GGAATCATAG AAACACAAAG 3120
GATAAGTCTT TGGTGGGTAT TTTGATTAT GTGGATATTC ATGTTCTTAA TTTAGAAAAAG 3180
ATCTTTTCAGA AACGACAAGT AGCTTATCGA AAGATGGATT ATCGTGTTCAT CGAGGGGTGAG 3240
GAGAAACAAT TCGTTTATGT TGATAGTAGA TATGAGAAGG TGTTGAGAGA GGAATTAGCA 3300
GGGGAAGAGC AGGAATGTCT GCTTATTTTA CCTTATGTGC ACCAGACAAA ACTGATGAAT 3360
TTTCTAAAAG AATTTAGGAT TAGTCAAAAT GAGATATGTA TACCAGAGAC GGTTCGAAAT 3420
AAAGCATGGC TAGACCAAGT GAAGAGCCAG AAAATTAAAG TGTCTTTTAC TCAATCAAAA 3480
ATAGTAACGC CTATTCTTTT GGTGAATAAG ACTATTGTCT GGTATGGTGC AATGCCATTA 3540
TTAGGGAAGG TAGATGAGAT GACCATATTA CGTTTGGAAAT CAGCTAGTAT AGTTTCTGAA 3600
CTAGTGGCAG GTTTACGATA GAGAAAAATT TTAATAAATT CTATGTATGA TTTTCATTTC 3660
TTTAGTGAGA CTGTTGCCAT TATCACATTC GAATCAGACA AATAAAAAAA ATTTTATATA 3720
GTACTTGACA AATAGATTGA AATATCATAA AATAAAAAAG GTTACAGAGT TATTAAATTAT 3780
TTAAGCTTCA TGTCACCATT AAAAATTGAA ATAAAAAGGAT GTTATCACTA ATACAAGTGA 3840
GCAGGAACCT ATTTAATCAC ATCAGAAGAA GTTCTTTGAT GTTTTTAAGT AGGTTCTCTT 3900
TATTTTAAAA GGGAAATTTT ATGATCATAA AACGAATACT AAACCAAAAT GCCGTAATTG 3960
CGCAAAGTAA AAAAGATATC GATATTCTTC TTTTGGGAAG GGAATAGCT TTTGGAAGAA 4020
AAACTGGAGA TAAAGTAAAT CCAATTGATA TTGAGAAAAG TTTTTTCTC AAAAATAGAG 4080
ATAATATGAC CCGTTTACA GAGATGTTA TTAACGTCC TTTGGAGTGT GTGTACATCA 4140
CGAAAAAAT ATTTAACCTA GTTAAATATA CATGGGTAA TAATTTTGAT GAAATTAATCT 4200
ATATTAAATT AACGGATCAT ATTTCTTCGA GCATAGAAGC TTATAAGAA GGAATTATTA 4260
TTTTCGAATCC CTTACGCTGG GAAATATCGA AATATTATPA AGAAGAATTT GAATTTGGGA 4320
AAAGGGCTTT ACAAAATAA AAAAAAGAGT TAGGTATTGA ACTTCCAATT GACGAAGCTG 4380
CATTCATAGC GCTACATTTT GTTAATGCTA ATTTAGAAAA TAATTTTCAA GACTCGTATA 4440
AAATCACTGA AATAATTATG GGAATTGAGA AAATCAATCA AGATTTCTAT TGTAAGTAGT 4500
TTAACCAAGA TTCTATTGAT TATTATAGAT TCAATACTCA TATGAAATTA TTGCCCCATC 4560
GCTTGGTTGA GAATACAACT TATTGTGACG ATGATGA 4597

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(2) INFORMATION FOR SEQ ID NO: 176:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 3984 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double

1108

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

CGGCTTATTT ACTACTTGTT CCATCATATA TGGAAATGCT ATGAACCTGC CTCTCATATT	60
AGGGAATTTT TTATCCACTA AATAAAGAGC TTGGTATACAT AATGATTGCT AAACAAGST	120
TCTTGCACTA TTGGATACAA CTGCCGGAAG TCCCTGTTTT TTGATAGCTT GTACCATGCT	180
TTTGATAGGT AAACACTATA AATAGGCCGA TGCTCCATCA ATACGAATCG GTGTATCAAT	240
TGGTGTATTG CCTTCGTTAT CAGGTATGGG AGCATCATCT TGATTAATAG CCACTCGTTC	300
AGGTGTTAAG CCGGTCCTGC CGCTTGCCTG TCCAAATACAA AGTACAGCAT CTGGTTGATA	360
TCGTAATATT TCTGCCCTCA AAACCTCTGA CGACTTATAA AAAACCGTTG GAATTTCTAC	420
CCAGCGAACT TCAGCCCCAT TAATCTCAGA TGGTAATAAT TTTCAGCCTT CCAAGCTGG	480
ATTAACTTTT TCACCTCCAA AAGGATTAAA ACCTGTAACT AATATTTTCA TTTTATTTTC	540
CTTACTAAA ATGCGAGAAA GTACATTAAG AATATGTGAA TAACAATCAT TACTAGAGCA	600
ACACCTGCTT GAGCCTTTAT AAGGCCATTC TGATCTTTCA TATCCATCAA TGCTGCTGGT	660
AGAGCGTTAA AATFAGCAGC CATTTGGGTC AATAAGTCC CACAATAACC TGCTGTCAATG	720
GCAAGAGCAC CAGCCACAAT TGGATTAGCT CCGAGAGCAA ATACAAAGGG AACTCCAACA	780
CCTGCTGTAA TAACGGTGAA TGCTGCAAAA GCATTTCCCA TAATCAATTG GAATAGAACC	840
ATTCAGAA GAA CATAGGCCAA AACTCCTATA AAGCGACTAT CTGAAGGAAC AATACCGCTA	900
ATCAGATGAG AGATTACATC ACCAACACCT GCTACAGTAA AAATAGCCCC CAAAGCCCCCT	960
AATAATFAGG GAACAATCCC ACTTGTGTAA ACTTGCTGAG TCATTCGATT ATTTTCTGAT	1020
AACAGACTCT TAGGCTGACT ATTGGTAATC ACAAGAACAG AAATTGTAGC AAACAAGGCG	1080
GCAAGGCTAA TCGAAATCTT GCTAAATCTT GGAATCATTT GCGCTAAGAC CAACGCAAGT	1140
ATTGCCATCA GCATAACTGG AATAAAAAAT TTATTTTTCA ACCTGTTAGA TTCAATATTG	1200
GCTTTCATTT CATCTAAGGA TGGCAAGGTT CCGATACGGA CTTCGTTAAA CAATGTTAAC	1260
AGCGATAATA GGATTACAAT AATACCAATA CTCATATTGG GCATATAGGA ACCACCTATA	1320
AACGTAATAG ACAATAGAGT CCAAAATGCA GATGTCCCAA GTCCGAACGCG GTTTGTTTTA	1380
TCTTTATAAC TACAATAGCG TGTATGGAGA AATTGCAAC CAATCACAAT ATAGGTCACAC	1440
TCTAATAGTT GCTTTGCCAA CTCTGTCAAT TTTGTTCTCC TCCCCTAGTC TTTTTGATA	1500
TCAATTTTTT ATCAAAATAA TAATTATAAA TCCCACATAC AATAAGTGTT ATAACAGCAA	1560
CAATAATAGA TGTAGAAGCA ATCCCTGCAT AATTGCTTTC ATAGCCTAAC TGATCTAATG	1620

TTCCCCCTAT CAAGAGGACT CCCCCAGCAC	1680
CTACAAACGT ATTTTGAGCA AAGAAATTTT	
CAAAATTTTC ATTCGCAGCC GCACGGGCTT	1740
TTATTGTCTC ATCTTCAACC TCTGTAACT	
TTCTACCTAA TTGAGACTCT GCAGCTGCTT	1800
CTCCCATFAG TTGAACCAA GGTCTGACAA	
ACTGAGGGTG TCCCTCTAGA CGAATGAAA	1860
AGAAACGAGC TAACTCTCGA ATAAAGAAAT	
AAACTGTATA GAAGTTTCCA ACTGTGAGAC	1920
CTTTAATCTT TCGAATCAA TCGATTGATC	
GTTCGTTGAG TCCAAAGGTT TCTGACAGCC	1980
CCACAAGAGG CAAGTAAAC ATAAAJATCG	
TGAGCACTCG CTGATTGCTA AATCTTTTC	2040
CCAAAATCTC CAAAATTTCA ACGAGAGAAA	
CACCTGAAAC TAAAGCTGTA ACCAAACGAG	2100
CTAAGACTAC TGTTCGAATT GTATCAAAAT	
TTAAJATAAA ACCCACAACA ATGATTGCTA	2160
TTCTATTAA TCTAATCCAC TCCATATCAA	
ACTCCTTTAT ATTCAAATG ACAGTATTTT	2220
TAAAJATTTA TCAAGATCAA TACCAATCCT	
TATTTAATGT GTTTTCTFAG TTCTTTTGG	2280
TATTTGCTAT TGGATTCCAA TTTTCTTTT	
TGCCATTTT TAAAAACCTC GTTATATTCT	2340
TTTGTGTFAA CAATATCTTT TTGCAATTTT	
ATTCCTTTAA AGATATATGG ATCCCCCTTA	2400
ATACCAACTT GTGAGTANG TTTTGAGAA	
GGTACTACGT TACTTACAA TGGAGAACCA	2460
CCAGATGAAG CTGTTGGCNT CAATAATGAA	
CTATCTGTCTG ACCAAGCTTG AGCTTTGGCA	2520
TATTTTTCAT ATCTTTCTC TAGGTGAGT	
GTCTCAGAAA CAGCATCTTC TAACAATTTT	2580
TTATATTAT CCAAACGAG TTTAGCTACA	
ACATCCTTAT CTTTCTCTT CGTAATACCA	2640
AGGTGTTTCA TGGCAGAACC AGATTTTGA	
TCTATAATAT TCAAGTGAGA CGCTGGATCT	2700
TGATAGCTTG GAGCCCATCC TGTACTGTTT	
AAATCATAGT CTTTTTGAGA AGGAGCAACA	2760
TTGCCGTATT TATCATTTTC CATCAAAACA	
TCAATAACAT TTCCAAATAC GTCTGTCTCT	2820
GATGTTGCG TGCTATACT GTAGCCCAAT	
GATGCTGGAT CTACTGCATA GACATAAGAA	2880
AATGTTGTCTG GTGCATCTGC TTCTTTATCA	
GTTTTTCAC AAGCCACTAA AATAGCTGAC	2940
GTGCTCAGGA CCACCTCTGC TGTAAAGAC	
CACTTTTCT ATTTTCAAAA GAATCTCCTT	3000
TGTTTTATT TAACTACTT TTACAATCCA	
ACCTTCTGGC GCTTCAATAT GGCMAACTG	3060
AATACCCGTC AATTCATTAT ATAATTTACG	
CTCTACAGGA CCTACTTCTG TTCTACTATA	3120
GAATACATGG AAATCATCAC CATGPTGAAT	
ACCTCCAATT GGAGAAATAA CCGCTGCTGT	3180
ACCACAGGCA CTTGCTCTA CAAJACGGTC	
AAGATTATCA ATTGGAACAT CACCCTCAAT	3240
AGGAGTTAAT CCAAGCGAT GTTTCGCCAA	
ATAAAGCAAG GAATFCTGG TAATAGATGG	3300
CAAGATAGAT GGACTCAATG GTGTTACAAA	
TTCAATATCA GCTGTAAATC CAAAGAAGTT	3360
AGCTGATCCG ACTTCTCAA TCTTTGTATG	

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AGTTGATGGG TCCAGATAGA TAACATCTGA GAAATGACGT GACTTGGCCA TTTTTCCTGG	3420
TAAGAGACTT GCAGCATAGT TTCCACCAAC CTTAGCCGCA CCGTACCAT TTGTTGCTGC	3480
ACGGTCGTAC TCATCCTGAA TCAAGAAGTT GGTGGGACC AAACCACTT TAAAGTAATT	3540
TCCAACCTGC ATAGCAAGA TGGTGAAAT GFACTCTTCT GCCGGTTTA CCCCGATAAT	3600
ATCTCCGACA CCAATCAAAA GAGGCGAAG ATATAAGGTT CCACCTGTT CGTATGCTGG	3660
TACGTATTCT TCATTOGCAC GGACAACCTG TTTACAAGCT TCTACAAACA TGTCTGTGG	3720
AACCTTGTGC ATCAAGAGAC GGTACATGT ACGTTGCAGA CGTTAGCAT TTTCAATCAGG	3780
ACGGAACAGT TGAACACTGC CATCTTAGT ACGATAAGCT TTCAAACTT CAAATGCTTG	3840
TTGTCCATAG TGAAGACTTG GAGAAGACTC TGAATATGC AAAGTTGCAT CCTCTGTAAG	3900
CTCTCCTTGA TCCCATTTGC CATTTTGTAA ATGAGCAAGA TAGCGATAAG GTAATTTCT	3960
ATAGGAAAAA CCGAGGTTT CCGG	3984

## (2) INFORMATION FOR SEQ ID NO: 177:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 8703 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

TATCTAATTA TTGGTTTTTA TCGCTGACCT TGGCTATGTT TGGGGTTGTT TTACCCCTGT	60
TGCTCTCAAC ACCTTTCTCT TTGTTGCTTA TTGCTTGTTT CTCCAGAAGT TCCAAGGAT	120
TCGAAGATTG GCTTTATCAT ACCAAGCTCT ATCAAGCATA TGTAGCTGAT TTCTGTGAGA	180
CCAAGTCTAT TGGCGGTGAA CGAAAGAAAA AAATCATCGT CTCTATCTAC GTCTTGATGG	240
GAATTTCTAT TTATTTTGCA CCTCTTTTAC CAGTCAAAAT CGGTCTGGGT GCTTTGACCA	300
TCTTTATTAC TTATTATCTC TTCAAGGTCA TTCCAGACAA AGAATAGTTA AAACAGTAGT	360
TTWTTGGCCT GATAAAATTG AAAGCATATT CATAACAATA TGATATAATA AAATTGAAGT	420
AATATTCAAG GAGAATCAAA TGATTTACGA ATTTGTGCTT GAAAATGTGA CTTTACTTGA	480
AAAAGCGATG CAGGCTGGAG CTCGTGGATG TGAACCTCTG GATAATCTAG CAGTTGGTGG	540
GACAACACCC AGCTATGGAG TGACTAAGGC AGCGTTGAA CTGGCAGCTA ACTACGATAC	600
AACCATCATG ACCATGATTC GCCCAGCTGG TGGTGACTTT GTCTATAATG ACCTAGAAAT	660
TGCTATCATG CTAGAAGACA TTGTTTGGAC TGCTCAGGCT GGAAGTCAAG GGGTTGTATT	720
TGGAGCTTTA ACTGCTGATA AAAAGTTGGA TAAGCCTAAT CTGGAAAAAT TAATTCGTGC	780

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ATCAAAAGGA ATGGAAATG TCTTCACAT GGCCTTGAT	GAACAAAGTG ATGAAGATCA	840
AGCGGAAGCT ATTGACTGSC TCAGTCAAGC CGGTGCACT	CGTATCTTAA CTCGTGCTGG	900
TGTGTCTGGC GACTCCTTAG AAAACGTTT TGTTCACAT	CACAGAAATT TGGAGTACGC	960
TAAAGGTAAA ATTGAAATTC TACCAGGTGG GGGGATTGAC	CTTGAAAACC GTCAAACTTT	1020
TATCGACCAG GTGGGGGTAA CACAATTGCA TGTACTAAG	GTGTGTTTTT AAAAAATAGA	1080
AAGGAATGTC TAGCTTTGGG TAGCAGTTTT CACTTATGTT	TGAAATTTTT AAATCCTATC	1140
AAATTTAATCA AGAAAAGGCT CATGATTATG GTTTTATAGA	AAATAGCGAA GTCTGACAT	1200
ATAGTTGCCA GATTTTGCAA GGTGACTTTG TCATGACTGT	GTCCATCACT GCTGATAATG	1260
TGAACTTTCA AGTCTTTGAC CAAGAGACTG GTGACCTCTA	TCCCTCACGT TATATGGAAA	1320
GCAATGAGGG AAGTTTTGTC GGAATGTGCC GTGAGGCTTG	TCTGGAGATT CTTTACCAGA	1380
TTCCGAAGGC TTGTTTTGAT GTGCAAGATT TTATCTGTCA	TCAGACTAAG CGTATCATGA	1440
CTCAAGTTCA GGAAGATAT GGAACCACT TGGAGTATCT	GTGGGAAAAA TCGCCTGATA	1500
CAGCTGATTT CGGCCATGAA GGCANTCAAA AGTGGTATGC	CGTCTTGATG AAAATCTCTT	1560
GGATTAAGCT GGAAGGGGC AGAGAGGAC AAGTGAAGC	AGTCAACCTC AAGCATGACC	1620
AAGTAGCTAA TTTGCTTTCA CAAAAGGGGA TTTATCCAGC	CTTCCATATG AGCAAGCGCT	1680
ACTGGATTAG TGTGTCCTTT GATGATACTT TATCAGATGA	AGAAGTACTG GAATTGATAG	1740
AAAAAAGTTG GAACCTAAC TCTAAAAAAT GAAATATTTT	AATAATTTTC ATGAACCTTC	1800
AAATAGCTAA ATATTTCTTA CTGAAGAGAT TTTTAGAAAA	TATAGGATTT ACCACACTAG	1860
AGGAATATGG TGCCATCTTC AAATACCTGA TTGAGATGT	CAAGACGGAT CGTCAGATCA	1920
TCTATTCGCC TCACTGTCTAT GATGACCTCG GAATGGCAGT	GGCAAAATAGC CTTGCTGCTG	1980
TCAGAAATGG TGCAGGACGT GTTGAAGGA CTATCAATGG	TATTAGGGAG CGAGCTGAAA	2040
ATGCTGCTTT GGAAGAAAT GCAGTGGCTC TCATATATTCG	CCAAGATTAC TACCAAGTAG	2100
AAACAGTAT TGTCTCTAAAT GAGACCATCA ATACGTGAGA	AATGGTTTTCT CGCTTCTCTG	2160
GTATTCCAGT TCCATAAAAC AAAGCCGTCG TTGGTGGCAA	TACCTTCTCC CACGAATCTG	2220
GTATTCAACA AGATGGAGTC CTTAAAAATC CTCCTACTTA	TGAGATCATC ACACCTGAAT	2280
TGGTTGGTGT TAAGATCTCG CTTGGAAAAAT TATCTGTCG	CCATGCTTTT GTTGAGAAAC	2340
TGAGAGAAAT GCCCTAGAT TTTACAGAAAG AGGATATCAA	ACCACTCTTT GCTAAGTTCA	2400
AGGCACTGGT CGATAAGAA CAAGAAATCA CAGATGCAGA	TATTCGAGCT TTGGTAGCTG	2460
GAACCATGGT TGAATAATCA GAAGGCTTCC ACTTTGATGA	TTTACAACTT CAAACTCATG	2520

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CAGATAATGA	CATTGAAGCG	CTCGTTAGCC	TAGCCAAATAT	GGATGGTGAG	AAAGTCGAAT	2580
TTAATGCGAC	AGGCAAGGT	TCCGTTGAAG	CAATCTTTAA	TGCTATCGAT	AAGTTCTTTA	2640
ACCAATCTGT	TCGTTTGGTG	TCCTACACTA	TCGATGCGGT	AACAGATGGA	ATCGATACCC	2700
AGGATCGGGT	TTTGGTCACT	GTGAAAACA	GAGATACAGA	AACCATCTTT	AATGCAGCAG	2760
GGCTTGATTT	TGATGTGTG	AAGGCTCTCG	CTATTGTCTA	TATAAACGCT	AAATACCTTTG	2820
TTCAAAAAGA	GAATGCAGGT	GAGATGGGAC	GCAGTGTTTC	TTACCACGAT	ATGCCTATAG	2880
TGTAAAGGAG	AAGGCTATGG	CAAAAGAAAT	AGTAGCTCTA	GCAGGAGACG	GAATTGGCCC	2940
AGAAATCATG	GAGGTTCGTT	TAGAAGTTCT	GGAGGCTCTA	GCTGAAAAA	CAGGTTTGA	3000
CTATGAGATT	GACAGACGAC	CGTTCGGAGG	TGCAGATATT	GATGCAGCAT	GACCTCCCTT	3060
ACCTGATGAA	ACCCTTAAGG	CAAGTAGGGA	AGCAGATGCT	ATCCTACTAG	TAGCTATCGG	3120
TAGTCCCTAG	TATGATGAG	CAGTGGTTTC	CCCTGAACAA	GGCCTGATGG	CTCTCCGTA	3180
GGACTCTAAT	CTTTACGCTA	ATATTGCTCC	TGTAAAAATC	TTTGACAGTC	TCAAGCATTT	3240
GTCAACCACT	AAACTGGAAC	GAATTGCTGG	TGTAGACTTT	GTCGTGGTGC	GTGAATTGAC	3300
AAGCGGATT	TACTTTGGAT	ATCATATTCT	TGAAGAGCGC	AATGCGCGTG	ATATCAACGA	3360
CTATAGCTAT	GAGGAAGTGG	AGCGGATTAT	TCGCAAGGCC	TTTGAAATGG	CAAGAAATCG	3420
CAGAAAAATC	GTTACTAGTA	TCGATAAGCA	AAATGTTCTA	GCGACCTCAA	AACTCTGGCG	3480
GAAAGTAGCT	GAGGAAGTCG	CACAGGATTT	CCCAGATGTA	ACCTTGGAAC	ATCAGCTGGT	3540
AGACTCAGCT	GCTATGCTTA	TGATTACCAA	TCCTGCTAAG	TTTGATGTTA	TTGTAACGGA	3600
GAATCTTTTT	GGAGATATTT	TATCTGATGA	ATCAAGCGTC	TTATCTGGTA	CACTTGGGGT	3660
TATGCCATCA	GCCAGTCATT	CTGAAAATGG	ACCAAGTCTC	TATGAACCTA	TTCACGGTTC	3720
AGCACCTGAT	ATTGCAGGTC	ANGGAATTGC	CAATCTTATT	TCCATGATTT	TATCAGTTTC	3780
CATGATGTTG	AGAGATAGTT	TCGGACGTTA	TGAGGATGCA	GAGCGTATCA	AACGTGCTGT	3840
TGAGACAAGT	CTGGCGGCAG	GAATTTTAAC	GAGAGATATA	GGAGGTCAAG	CTTCAACAAA	3900
GGAAATGACG	GAAGCTATTA	TTGCAAGGTT	ATGAAGTTAG	ACGAAAAAAT	TACTCTAGTC	3960
CTTTTGATTT	GGAAATGTCAT	CATTTCTTTC	ATTTATGTTA	TTGACAAATC	TAAGCCAAAG	4020
AGAAGAGCTT	GGCGCATCCC	TGAGAAATTC	TTACTTATTT	TAGCCCTTAC	TTTGGTGCTG	4080
TTTGGTGCTC	GGCTAGCAGG	AATCATCTTT	CACCACAAGA	CTCGAAAAATG	GTACTTTTAA	4140
ATAGTTTGGT	TTCTTGGGAT	GGTGACCACA	CTAGTAGCCT	TATATTTTAT	TTGGAGGTAA	4200
TGATATGCGAG	GGTCTTCGAG	GGAAATACGCT	GCTTGGGCTC	TAGCGGACTA	TGGTTTTAAG	4260
TGCTGATATTG	CAGGATCTTT	CGGTGACATT	CATTACAATA	ATGAACCTCAA	TAATGGCATG	4320

1113

TTGCCAATCG	TTCAGCCTAG	AGAGGTTAGA	GAGAAACTAG	CCGACGTAAA	ACCAACCGAC	4380
CAGGTAAC7G	TGGACTTGGA	ACAACAAAAA	ATCATCTCAC	CAGTTGAAGA	ATTCACTTTC	4440
GAGATAGATA	GCGAGTGGAA	ACATAAACTC	CTAAATAGTT	TGGATGATAT	CGGTATTACC	4500
TTCCAGTATG	AAGAGTTGAT	TGCTGCTTAT	GAAAAACAAC	GACCAAGCCTA	CTGGCAGGAT	4560
TAGAAAAAAT	AGAAAAAGAG	ATATAGTAAA	CTGAATAAAG	ATGTAAACAA	ATGAATTGGA	4620
GCTTAACATC	CATTTCAGC	AATTTTTTAG	AAACTACAGT	GGACTATTCT	GGATTCAACA	4680
CATTATAAAA	TTATGACAAA	ACACATTTCAC	AAGAAGGCTA	CGACATTTTA	AAAGGTGAGG	4740
GCGGATG7AT	CGTTTGCCCT	ACTAAAGTTG	GTTACATTAT	CATGACCAGT	GACAAGGCAG	4800
GACTTGAGUG	TAAGTTCGCA	GCCAAAGAAC	GTAAGCGTAA	CAAAACAGGT	GTGTGTTCTCT	4860
GCGGTAGCAT	GGATGAACCT	TGGGCTTTAG	CGCAACTCAA	CCCAGAAAT	GAAGCATTTCT	4920
ACTAAAAACA	TTGGGATGAA	GATATTCTTC	TTGGTTGTAT	CTTCCCTTGG	AAACAGAGAG	4980
CTTTTGAAAA	ACTCAAAGCA	TACGGGGATG	GCCGTGAAGA	ACTTATTACT	GATGTACGTC	5040
GTACTAGCTG	TTTTGTATC	AAGTTTGGAA	AAGCAGGTGA	ACAATTGGCT	GCCAAGCTTT	5100
GGGAAGAAGG	TAAATGGTC	TACGCCCTCAT	CTGCTTCAAT	GACAAAACGA	TTGAAACTCG	5160
CTATGAGCAA	GGTGTAAATG	TGCTCTATGGT	CGATAAGGAC	GGCAAACTCA	TCCCAGAGACA	5220
AGGAGGAGCA	CGTTCAACTT	CACCAGCTCC	AGTTGTGATC	CGTAAAGGCG	TTGACATTTGA	5280
TAAAAATCATG	ATGCACCTGT	CAGATACTTT	TAACTCATGG	GACTACCGTC	AGGTTGAGTA	5340
TTATTAGGAT	AGAGAAGAAG	TCTAGTGTTA	TGAGATATTA	AAGCTCCTAA	CACTGGGCTT	5400
TTGTTTAGAA	TTTCTTTTCT	TTTTCTATAG	GATATGGTAT	TCTATGTAGA	AAATATATGT	5460
TAATAAGTAA	TGCCAATATT	TAAACATCAT	TAGTAAAAAG	AGTTAGATTG	ATGAATAAAA	5520
GAAAAGTTAG	TTTAGAAGAT	TTTTATTAAT	GGTATAGTCT	AAATAAAGAA	GAGTTATTAA	5580
ATAAGGCAAC	TGTTGGTGAA	AAGTTTAAAT	ATAAATTAA	AGAAGAGTTT	CTCCAGGAAT	5640
GGCCTTTGGA	TAGGATTTTA	ACAATGTCAA	TCGATGAATA	TGTAATAGGA	AAGGACAGCG	5700
AAATTAAGTC	TTTATGCTAC	GCTCTTGAGA	AGGGAAAAATA	CAAAAATCTA	TTTCTTGGA	5760
TTTCTGGTGG	CTCAGCTTCA	AAATTGGTA	TTTATTGGAA	TAAAAAACA	AACAAATATA	5820
AAGATCAAGC	TAATTAATGAG	ATTTCAGAGT	TGAGTCAGCG	ATTTTCAAAA	TTAAATCAG	5880
ATTTGTATGA	AATTAATCAA	GAAGGTATTC	GTTTAACTT	TGAAAATCCT	ATTTTGTATA	5940
TGAAAGATC	AACAATGAA	TTTATTGGTC	GTTCTGCTAT	GGTGACAAAA	TTACTTTGTA	6000
TCATACTGTA	GGGAGATCCT	TTCTTTGGTG	TAAATATTAA	TAGTCAGAAA	GAATTTTGA	6060



1114

ACCACTTTGT TTCTCAGACA AATCAAGGTG GACCTTATCT GC AAAATCAT AAAATPATTTG	6120
AAC TGGTGTC CAAAACCTTAT CCTGAGTTTG AGCCATCGAA ATTAGGAAC ATGCTTTTGTG	6180
AGTATCTTAA GCTTTTATG GAAAAAAGG AAGACAATAG TACAATGGAT TCATCAAAACA	6240
ATTTCGTCA TCAATTAAC TCAATCTCTAT TAAAGTCTCC AAACCTCATC CTCGCGGTG	6300
CTCTGTGCAC GGGAAAAC TATCTTGCTA AAGAAATTGC TAAAGAAATTA ACGGATGCGA	6360
ACGAAGATCA AATCGGATTT GTACAAATTTC ACCCATCATA TGATTTATACG GATTTTGTAG	6420
AAGGTTTAA ACCAGTATCA AATGGGGATG GAGCTATTGA GTTTAGGCTA CAGGACGGTA	6480
TTTTTAAAGA TTTTGTCTAG AAAGCAAAAG AAACCCAAAT GATTGGAGGA CAGATAAAT	6540
TTGATGAGGC TTGGGATCTCT TACTTAGAAT ATATAAATGT TGTGAAGAA AAGAAATATA	6600
TAACAAAAAC ATCTTACTTA TCTGTTAATA GTAGACAAA TTTGTACGTA AATTATGATA	6660
GTGGTGTTC AGGATGGTCA CTACCTAGCA AATATGTTTA CGAGTTGTAT AAAGATAAAA	6720
ATTATAATAA GCAAGAATAC TACAAAAGTG GTGGAAAAAC TGCTCTAGAA ACATTGAGAA	6780
AGAGATTTGG TTGAAAGAC TATGTTTCCC CAACAGAAAT TGATCTCTGAT AAGAATTTTG	6840
TCTTCATCAT CGATGAGATC AATCGTGGGG AGATTTCTAA GATTTTGGC GAACCTTTT	6900
TCTCTATGGA CCCGGCTAT CGTGGTGAA AAGGAAGTGT TTCTACCCAA TATGCAATC	6960
TACACGAAAC TGATGAAAAG TTCTATATCC CCGAAAATGT TTACATCATC GGAACATATGA	7020
ATGATATTGA TCGTTCACTG GATACCTTGG ATTTTGTCTAT GCGTCGTCTG TTTCTTTTG	7080
TTGAAGTTAC TGTCGAGGGT CAAGCTGGCA TGTTCGATTA AGAGTTGAAT ATCCATGCGA	7140
AAGAAGCAAA AATTGCTCTA AGAAACTTGA ACGCTGCTAT CGAAAATATT CAGGAATTA	7200
ACAGTCATTA TCATATTGGA CCAAGTTATT TTCTTAAGTT GAAGGATGTA GATTTTGAAT	7260
ATGAATTACT CTGGTCTGAT TATATTAAAG CTCTCTAGA AGACTACTTG CGAGGTTCTT	7320
ATGATGAGGT TGAACCTTGA GAACCTTGA AAAAAAGCAT TGATCTGACA AATAATGAGC	7380
AAAAAGATCA GGCAGTAGCT GATGACATG AAGGCGATGA AAACGATGAT GCGGATTAAT	7440
GATAATCAAC ACAAGATTAT TAAAGAAAA TTTGTTGAAG AATATCTTAA ACTAAGCAAT	7500
CTCTCTTTAG ACAGAACCTT GGAAGGCTTA TCCCAAGATG AACGTTATTT CATTTTCCCA	7560
AATGATTTGA CTCATATCTC TGATTTGGAT AAGGACCAAA AGATTTTGA AACAGTCAAT	7620
CAGAAAAATCA AGACAGGGA CCGTATTTGG TTTCTTGGAT ATGGTCAGGA AAGATTAACG	7680
ATTCTCTCAC GATTTTCTGA TGAGAGTAAT GACCACCTTT TGCATTATCT CTTAAACAAG	7740
GTCTCTATA TCAATCTCAC TAGTTTAGAT GTTGTCTTGT CTCGTGAAGA GAGCTTTAT	7800
CAACTTTTGG TGTATCTCTT TCCCAAGTAT CTACAAGCTG CTATTCGAAA AGGCTCTTAT	7860

1115

AAGGAATATC ATCGATTTTC TCATAACGAC AGTCATGTTA AGGGAGTGGT TGAATGAAG	7920
AACCATCTCA AGAAAAATCT TCCTTTCACG GGAAATATTG CCTACGCAAC GAGAGAGTTT	7980
ACCTATGATA ATCCCTCAT GCAGTTGGTC CGTCACACTA TTGAATACAT TAAGAATCAG	8040
AAAAGCAATG GTCAGGGGT ACTAGATAAT CTC7CAACTA GTCGTGAAA CGTATCTGAA	8100
ATCGTGCCTG TAACGCCCTC TTATAAACTA GCTGATCGTG CTAAGATTAT TCGGGGAAAT	8160
CAATCTAACC CTATACGTCA TGCATACTTT CACGAGTACA GAAACTTACA AGAATTTGT	8220
CTGATGATCC TAAACCAAGA AAGCAGCGT TTAGGGTATC AAGATCAAAA AATCTATGGT	8280
ATTCTCTTTG ATGTTGGCTG GCTTTGGGAA GAGTATGTTT ACACCTTGTG GCCAAAAGGT	8340
TTTGATACATC CCAGAAATAA GGATAAGACG GATGGAATTT CAGTATTTTC TGTGGGAAA	8400
CGAAAAGTAT ATCCAGATT TTATGACAGA GAACGAAAGA TTGTTCTAGA TGCAAAATAT	8460
AAAAAATGG AATTGACTGA AAAAGGAATC AACCGTGGG ACTTATTTCA GCTGATTTCC	8520
TATTTCTTAT TTTTAAAGC TGAGAAGGCT GGACTGATTT TTCTTAGTAT GGAGCAGTCA	8580
GTAAATAGTG AAATAGGAAA AGTAGCTGGC TATGGAGCTC AATTGAAGAA GTGGTCTATT	8640
CGAATCCCTC AGAATGCCCTC ATTCTATAGT ACATTTTGTG AAATGATGGA AATTCAGAA	8700
GAG	8703

## (2) INFORMATION FOR SEQ ID NO: 178:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 4854 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

CATCACCAGT TTTAGATGGC TTTAACAGTG AATTTATTGC TTTTAATCTT TCTGTTCGC	60
CTAATTTAGA ACAAGTACAA ACAATGTTGG AACAGGCATT CAAAGAGAG CACTACGAGA	120
ATACGATTCT CCAATAGTAC CAGGCTGGC AATATCAACA CGATTCTTAT CATCGGTTC	180
TAGAGAGTAA GGGAAITCAA GCATCCATGT CACGTAAGGG CAACAGCCAA GACAACGGTA	240
GGATGGAAAT TTCTTTGGC ATTTTAAAT CCGAAATGTT TTATGGCTAT GAGAAAACAT	300
TTAAATCACT TAACCAATG GAACAAGCCA TTATAGACTA TATTGATTAT TACAACAATA	360
AGAAAATPAA GATAAAACCTA AAGGACTTGA GTCTGTGCA GTACAGAACT AAATCCTTTG	420
GATAAATTAT TTGTCTAAT GTTTGGGGC AGTACACAAG AAAGCGCTTT AAACCACTA	480

1116

GACCTTTTCA TAAGGTTGCG TTGATGTACC AAGATGAGGC TGGTTTCGGT AGAATCAGTA	540
AAC TGGGATC TTGTTGGTCT CCAATAGGAG TAGGTCCACA TGTCATAGT CACTATATAC	600
GAGAAATTCG CTATTGTTAT GGAGCTGTG ATGCCCATAC AGGCGAATCA TTTTTCCTAA	660
TAGCTGGTGG ATGTAATACT GAGTGGATGA ACGCTTTTT AGAAGAGCTT TCACAAGCTT	720
ATCCAGATGA TTATCTTTTA CTGCTTATGG ACAATGCTAT ATGGCAATAA TCAAGTACCT	780
TAAAGATCC GACTAATATT GGTTTTACCT TTATTCCTCC ATACACACCA GAGATGAACC	840
CATTGAACAA GTGTGGAAG AGATTCGTAA ACGTGGATTT AAGAATAAAG CCTTTCGAAC	900
TTTGGGAAGAT GTCATGAATC AACTCCAAGA TGTATACAA GGATTCGAGA AGGAGGTGAT	960
AAAGTCCATC GTTAAACCGA GATGGACTAG AATGCTTTTT GAAAACAGAT GAGTATAAAA	1020
TTGAATTGCT TATAAAAAAG CTCCATACAC TGGATGTGTA TAGAGCAATG GGGCTTTTAT	1080
TGATATAGAG TTTCTGGTTT TTTAGGACAA TTTCTCGGAT ACTTGCAATC TTTTAAAGTT	1140
TTTTGATTTT CTCTGGATGA GTGACGAGAG TGATAACATA AGCTTCCTTG CCCATACGAC	1200
CAGTACGGCC AGCACGGTGT GTGTAGGTTT CCTATCTCT AGGAATATCA AAGTTTACGA	1260
CACATTCTAG GCTATCGATA TCAATTCAC GAGCCAAAAG GTCAGTTTGA AGAAGCAGGG	1320
TTAGTTGGTT ATCTTTAAAC TTTTCTAAGA TGATTTTCTT AAATTTAAAC TTAACATCAC	1380
TAGCGAGGGA AACAGCCAAAT ATATCACGAT ACTGTAGTTT TTCTCGGCA TTCCCAAGGT	1440
CTGACAGGCT ATTGAAGAAG ACTAGACCAC GGAATCTCT TACATGAGCC AGTTTTCGTA	1500
GCATATCCAC TCGATGACGT TGGTCTAOLT GCATGAGAA ATGCTGGATA TTGTCCAATT	1560
TTTGATCAGA GAGATCAATA GTGCGTGAT TCGGCACAA CTTTCTCTGG TCAAACTTGG	1620
TCGTGGCACT CATGTAGACC AGTTGGTGGT CACGAGGTGC GTAGTGACTG ATTTTTCTTA	1680
CAAGTGAAT CTGGAATCA TCTAGTAATT GTTCAAAATC ATCCAGGATG ATGGTTTCCA	1740
CATTGATCAT CTTGATTTTT TTAAGTTTAA TGAGTTCAAA GATACGCCA GGAGTTCCAA	1800
TCAGAAATTC TGGCCCCCTT TTAAGACGTT CAATTGTCG TTCTTGACTT GAACCTGAAA	1860
GGAAGAGTTG AGCATCAAT CCGATAGCTT CTGCCACGTT TTTACATACA TCAAAAACTT	1920
GTCCAGCAAG TTTCTGATTTT GGTGCTAGAA TCAAGAGTGG TTGGGCTTTT TTCTTTTGTA	1980
GTCTGAGAAG ACTTGGTAGG AGATACGTA GGGCTTACC AGTTCCGGTT TGGCTCACTC	2040
CTAGAGGTTT TTCTCCAGCA AGAAGGGGCT CAATAGTTG AGTTTGAATG GGGGTGAATT	2100
CTTGAAACC GACTGGTCA CTCAGTTCTT GCCATTCACT CGGTAGTTTG GTTTTCATTT	2160
TTCTGCTCA AATCTAATGC CAGAGTCTG GGGCATGGTA TATAGTAGCT CATGAACAGA	2220
GCCTGCATCA TACAGCCAAG TTTGCTAGAG ATTCAATCT GGTGCTGGA TCATGTGTGC	2280

1117

AAATGCAGCG	ACTTCCTCAG	TCATCGTATG	AGGAGCCTGT	TGGATAGGAA	GCTGGACTTG	2340
ATTTCCCTGG	TGGTCGGTAA	AAATAGCTGA	GCGAATATGC	TCAATCGTGT	TGAGAGTCAA	2400
GGTTCCTFTC	GTTGTATAAA	TCTCCGAAAG	AAGATTGGAA	GTGATGTTTT	TTCCAGCCTT	2460
GATGTGAAC	TGATAGTCTG	GGTAGAAGAG	GATACCATCT	CCATTTAGST	CAATGCTATT	2520
GTCAAGCTGT	TGAGCATGGT	AAGTCGCGTC	ATTGGCTTTT	CCAAAAAGAC	GAACAGCAGC	2580
ATAGAGGGGA	TAAATCCCCA	AATCCATGAG	GGCTCCACCA	GCAAAACGST	CTGAAAAGAC	2640
ATTTTGGTGT	TGTCAGCCA	ACAAATCAGG	CATCTTGGAA	GAGTATTTGG	CATAGTTGAA	2700
ATCTGCTCCT	AACAATGCT	TATCTGCTAA	AAAGTTTTTG	ATAGTAGTAA	AGGCTTTCTC	2760
GTGGTAAMTA	CGAGCTGCTT	CAAAGATAAA	ACAGTTAATT	TTTTCAGCTG	TTTGAATCAA	2820
ATCAAMCCAT	TCTTGTGGTT	GAGAGACAGC	TGGCTTTTCG	AGAAATACAT	GTTTACCAGC	2880
AGACAAGGCA	GCTTTTGCTT	GAGCAAAATG	TAAGGAGTTT	GGACTGGCGA	TATAGACTAA	2940
ATCAAAAGAA	GATTTGAAGA	AGACTTCTAA	TTGATCGAAT	AGTTGGATAT	TCTGATACGG	3000
AGAAGCAJAG	GTTGCTGCAG	TTTCTAGTTT	TCTAGAATAG	ATTGCGACCA	GTTGATATTC	3060
TCCACTGGTA	TGGGCTGCTT	CTATGAAATG	ATGGCTGATA	GCGCCAGTTC	CGATGACACC	3120
TAATTTTAGC	ATAAATACTC	CTTTTCCGAT	TTTAAATCCT	TCTTTCAITTA	TAACATAGAT	3180
AGACGGGACT	ATCCAACAGA	GAGGAGAAAA	TTTCAAATAA	GCTATTAGCT	TTCTTTTTCG	3240
AAFAAMTAGA	TAGAAGCATA	GAATCTAGCA	AACCTAGATT	TAAAAATGTG	CTAATAATAGA	3300
AGGAGGAAAA	GGAGGNTTCT	CAGACATCTA	GGTATCAGCC	CAACTAATGA	TTTGTCAATT	3360
TATCCGGGAT	ATGCTGGACT	TGCCAGCAAA	AAATGTGACG	ATTTTGGAGG	GAGTAACAT	3420
TCACGTCFPG	CCTTCCATGC	CCTACTCAGC	GTAAGATTTC	TATACTAGTA	TAGACGTCTT	3480
GGCGGAGTTA	GATAATGGAA	TCCAAGTTAT	CATCGAAATT	CAGGTTCAATC	ATCAGAAATT	3540
TTTTCATCAAT	CGCCTATGGC	CTTATCTGTG	CAGTCAGGTT	AATCAAAACC	TAGAAAAAAT	3600
TCGCCAACGT	GAAGGTGATA	CCCACCAAG	CTACAAACAA	ATCGCACTAG	TATACGCTAT	3660
CGCAATGTCT	GATAGTAATT	ACTTCTCAGA	TGACCTAGCT	TTTCATAGTT	TTATAGTAAA	3720
ATCAAAATGAG	AACAGGACAA	ATCGATCAGG	ACAGTCAAAT	CGATTTCTAA	CAATGTTTTA	3780
GAAGTATAGG	TCTACTATTC	TAGCTTCAAT	CTACTAGAAA	TTCCATAGAT	AGAAAACATC	3840
ATAATCTCTA	CAGATACGGA	TGTTGGAGTT	GATGTAAGAT	GCTTTTGGCTT	GCTAGAGGAA	3900
TTGTGGATGG	CCAAATTGTA	TCAITGAAAT	TATTCCTCAA	ATTTTGTATG	ATATAAATAT	3960
GAATAAAGT	AGACTAGGAC	GTGGCAGACA	CGGGAAAACG	AGACATGTAT	TATTTGGCTTT	4020

1118

GATTGGTATT TTAGCAATTT CTATTTGCCF ATTAGGCGGA TTTATPGCTT TTAAGATCTA	4080
CCAGCAAAAA AGTTTTCGAGC AAAAGATTGA ATCGCTCAAA AAGAGAAAG ATGATCAATT	4140
GAGTGAGGGA AATCAGAAGG AGCATTTTCG TCAGGGGCAA GCGGAAGTGA TTGCTATTAA	4200
TCCTCTCCAA GGGGAGAAAG TGAATTCCTC TOTTAGGGAG CTGATAAATC AAGATGTATA	4260
GGACAAGCTA GAAAGTAAGG ACAAATCTGT TTTCTACTAT ACAGAGCAAG AAGAGTCAGG	4320
TTTAAAGGGA GTCGTTAATC GTAATGTGAC CAAACAAATC TATGATTAG TTCTTTTAA	4380
GATTGAAGAG ACTGAAAGA CCAGTCTAGG AAGGTTTCAC TTAACAGAAG ATGGGCAACC	4440
TTTACACTTT GACCAACTGT TTTCAGATGC TAGTAAGGCT AAGGAACAGC TGATAAAAGA	4500
GTTGACCTCC TTCAATAGAG ATAAAAAAT AGAGCAAGAC CAGAGTGAGC AGATTGTAAA	4560
AAACTTCTCT GACCAAGACT TGTCTGCATG GAATTTTGAT TACAAGATA GTCAATTAT	4620
CCTTTATCCA AGTCTCTGG TTGAAATTT AGAAGAGATA GCCTTCCAGC TATCTGCTTT	4680
CTTTGATGTT ATCCAATCTT CGTACTTACT CGAAAAAGAT GCGGCTTGT ACUAATCTTA	4740
CTTTGATAAG AATCATCAA AAGTTGTGCG TCTAACCTTT GATGATGGTC CAAATCCAGC	4800
AACGACCCCG CAGGTATTAG AGACCTTAGC TAAATATGAT ATTACAAGCG GGCT	4854

## (2) INFORMATION FOR SEQ ID NO: 179:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2186 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

TAAACAGGTG TTAGTGCTC TAAACTATTA AAATCTAAG GAATAAGGC TACTTTTCT	60
GGGTCTGTGT CATAGTAGGT GTGGTCTTT TTTTCAGGTG TAGCCCATAG CTTTGAGGCG	120
ATAGTGGATG GTAGTTGGAT GACAGCCAAA TTCAGAAGCT ATTTCACTCA AATAAGCAAC	180
TGGATTGTCA GTAAGATAGT TTTTAACTCT ATCTCTATCA ACTTTTCTTG GTTTTGTCC	240
TTTTFACGTG TGGTTTAGCT CTCCTGTTTT CTCTTTTAGC TTTAACAGC CATAAATGGT	300
ATTACGTGAG ATTGGAAAA CGTGTGATGC TTCTGTATTA CTACCTGPTC GCTCACAAATA	360
AGAGAGAAGT TTTTACGAA AATCTATTGA ATATGCCATA AGAAGATTAT ACCACATGTT	420
GTACTATTTT TGGTTCATTT TACTATATTT CTAACACCTT AGAAATAATA AAACAAATTA	480
AATATATATT CTAATATATT GAAATAACA TCTATTTGTA TTATACTATC TTTGAGGTAA	540
CTATATATGA CTATATCAA AGACCACATT ATTTAGATTT TTTAAGAAAA CATCTGACC	600

1119

GACCAATCAT	CAAAAGTGTG	AGTGGAGTTA	GACGAGCTGG	TAAATCTGTG	CTTTTCAAC	660
TCTATAAAGA	GGAGTTACTA	GCAACTGGGG	TAGACGAGGA	TCAGATTATA	TTCAATCAATT	720
TCGAAGATT	GAGTTACTAT	GATCTGCGAC	ATTTTCAAAC	ATTATTGGCT	TATATAAAG	780
ATCAATTAGT	TAGCAAGAAA	ACATACTATA	TCTTTTACA	TGAATTCAA	TATGTTGAAA	840
AATTTGAAC	GGTAGCAGAT	AGTCTATTCA	TCTTAGCAAA	TGTAGACCTC	TATTTGACTG	900
GATCTAACGC	CTACTTTATG	AGTAGCCAAT	TAGCAACAAA	CTTGACTGGT	CGGTATGTTG	960
AGATAGAGGT	TCTTCCTTTG	TCAATTGAAG	AATATCTATC	AGGTCAATCT	CTCAGAGAGA	1020
ATCTGAATAC	AACAGAAATT	TTTAACAATT	ATCTCTTTAG	TGCTTCCTCT	TACTTATGTC	1080
AAACATCATC	TTACGATGAA	AAAAATTGACT	ATCTCAGAGG	AATATATAAC	TCCATACTGT	1140
TAATGATAT	TGTCAC TAGA	TTGGGAAAAAC	CAAACTCTAC	TATTATTGAG	CGCATTTGTC	1200
GAACCTTCT	CAGTAGTACA	GGTAGCTTAA	TATCAACAAA	TAGATTGCG	AATACCTTAG	1260
TCAGCCAAAA	TGTTTCAATA	TCCCATATA	CTTTGGAAAA	TTATTGACA	ACTTTGACAG	1320
ATAGTTTACT	TTTTTATTCC	GTTCACGTT	TTGATGTAAA	AGGTAGACA	TTATTGCAAC	1380
GTTTAGAAAA	ATATTATCCC	GTTGATTGAG	GTTTACGACA	TCTCTTATTA	CCAGACCAGA	1440
AAGAAGACAT	TAGGCATATC	TTGGAAAAATA	TGATATATT	GGAAATTGGA	CGTAGATATT	1500
CACAAGTATA	TGTTGGTAAT	TTAGATAAAT	ATGAGGTTGA	TTTGTGTGTT	GTAAGTATTC	1560
TTGGCCACTA	CGCTTATTAT	CAGGTCAAGT	AAACAACACT	TGCTCCAGAA	ACACTAGAAA	1620
GAGAAGTTAG	ACCACTAGAA	GCCATTAAAG	ATCAATTCCC	TAAATATCTA	TTAACAATGG	1680
ATACGATTCA	GCCAACAGCC	AATTACAATG	GAATCGAGAA	GAAAAGCATT	ATAGATTGGT	1740
TACTAGAAAA	ATAGATAAAT	ATAAATCATA	CAGCTAATTA	GATTTGCAAC	AGTCTGTTAT	1800
CAATGATTCT	ACCCAATCC	TAACAAGATA	TAGTGAATTT	CGAATACGCT	ATATAAPAG	1860
GACACTTGAA	AATAGAAATT	GGGGATGAAA	GGGATCTAT	AATTTCTGGA	AGTACTATCA	1920
AAAAATTAATA	TCATAGTCTT	ATTAGAGAAT	AGCATCACCC	ACTTTCTCAA	ATAAGATTAA	1980
ATTGTAACTG	AATTATAATG	AAAAAGAGAC	TGAGCAATCA	GTCTTTAAAA	TCAGAAAAGC	2040
GCATAGTATC	AGGTATTGAA	CAACCTTGAT	AATATGCGTT	TTATTATGGA	AATATTGCT	2100
TCATTTTCTC	CTGAAATAGA	GCTTTTGCTA	TCCTATTTTCT	CTCATTTTCT	AATGATTTAC	2160
TTCAACTTCT	TACCTCTTGG	GA AAAA				2186

(2) INFORMATION FOR SEQ ID NO: 180:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 3236 base pairs

1120

(B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

GTCCACAGGT	TGACTTCAGC	TATTTCTATA	GTATAAACTT	TATTTTATTC	GGTATAGATA	60
ATCTTCAATGC	CATTTTATAGC	ATTATCTAAA	GGAGAAAATA	ACATTTTATT	AGCATTATCA	120
ACACCAAAGA	TATGGTGACT	AGCTAGACTA	TAATTTCTCT	CTCCCATTAC	TTGCTCGCCT	180
TTCAATGTAC	CAGCTCCGTA	GAAGAGATTA	ACATTATCAA	GTCTTTTAAA	AATCGGCAAA	240
TTCAATTTCCA	ATTGAGGAAT	TGCAATTCCC	CCAATAACTG	GTAAATTTTG	AGCATCCCAT	300
TGAGAAAGTA	GAACAGCTTC	CGAAGAGATA	GCTTTGACAG	AATCAAAGTC	AAAATTGCCCT	360
TCTGTATCCT	GATTTCTTTC	TAAATTTTCT	TTTGATACCT	GGCTAACTTG	ATACTTATTG	420
GTATTCAGGA	CTATGAAAT	ATTTGCAATT	TGAGTATTTA	AAATCAAAGC	CAGTGACAGT	480
AATATCAGAA	ATCCTGCTAG	GATATTTGTC	AGCAGATTTT	TTGCTGTGTT	TTTCTTTTFA	540
TTATTTTTTT	GAGACATTAT	GCTTCACCTT	CTGTTCTGTT	TTCTGTCCCA	ACTTCTTCTT	600
TTTCTGCCAC	CGCAACCGTT	GTGAAAGTCA	CTATCTGAGC	ATCTTGATCC	AGCGGCATTA	660
CTTTAACTCC	CATAGTTGCA	CGTCCGTGTT	GTGAAATATT	GGCAAGATTG	GTTCGAATCA	720
TGACACCTGT	ATCAGTGATA	ATCATCAAA	CCTCATCCCC	TTGAACAGTC	ATAAGACCGG	780
CCAGCAAGCC	ATTTTTTTCG	GTAATTTTAG	CTGCTGCAAT	TCCCTTACCA	CCACGACCTT	840
TTGTTGGGTA	TTCAGTAGCG	ACTGTACGCT	TACCATATCC	TTTTTCTGTG	ATAATAAGAA	900
CCTCATCTTG	ATCAGTAATC	AAGCTGGCAC	CAACAACGTG	GTCTCCTTCA	CGAAGGTAA	960
CACCTTTTAC	ACCAAGTGGG	ATACGGCTCA	TACCAAGAAC	GGCTGATTGA	TTAAAGCGAA	1020
CTGCATAACC	AAACTTGGTA	CCAATGATTA	TATCCATATC	TCCTTCTGCC	AACAAGACAT	1080
TGATTTAACTC	ATCTTCATCC	TTTAAATTCA	GCGCTTTGAG	ACCATTTTGA	CGAATATTGG	1140
CAAACTCCTT	AACACTGGTT	CTCTTCACAA	TACCGTGACG	GGTTGTAAG	AAGAGATAAG	1200
CATCATCACT	CGCGTCAGAC	TCAACATTTA	TAACCGTCTG	AATACTTTTCG	TCTTCATCCA	1260
ATTTCAAGAG	ATTGACTACT	GGTAGCCCTT	TGGCAGTCCG	ACCATCTCTCA	GGAAATTCAT	1320
AACCTTTAAG	ACGATAGACA	CGTCCCTTGT	TTGTGAAGAA	GAGCAGATGA	TCATGGGTGC	1380
TAGTTGACAC	TAACTCACGA	ACAAAGTCAT	CATCTTTTAC	TCCCGTTTCT	TGGACACCAC	1440
GACCCCAACG	TTTTTGAACA	GTGAACCTGT	CCTGATCCAA	ACGCTTAAATG	TAGCCTCTGT	1500
TAGAAAGGGT	AATCAAGACA	TCCGATCTCT	CAATCAAGTC	CTCATCTCTG	AGACTCAAGA	1560

1121

CCTGTCCAAT CATCAACTCT GTACGGCGCT TATCAGAAAA TTTCAGTTTA ACTTCATCCA	1620
ATTCGTCCTT GATAATTGTA GAAACACGTT CAGGCTTAGC AAGAATATCT GCTAAATCCG	1680
CAATCAGAGC CAAGAGGTCA TCATACTCAG ATTGAATCTT ATCGCGTTCC AAACCTGTCA	1740
AACGACGAAG ACACATATCA AGGATAGCTT GACTTTGACG TTCAGAAACG TTAACCTGCG	1800
TCATCAACTC AGCTTGAGCT TCCGCACTCG TTCACTAGC ACGGATGATA CGAATCAATC	1860
GTGATATGG TCTAGCGCAA TCAAGAGACC TTCTAAGATA TGAGCGCGCG CTTCGCTTTT	1920
TTCTTATCA AAACGTGTAC GACGAACAAC CACTTCCTTT TGGTGCTCGA TATAAGCATC	1980
CAAAATCTGA CGAAGAGACA AAATTTTCGG TATACCATTT TGGATAGCGA GCATATTGAA	2040
ACCAAAATTG GTTTGCATTT GGGTCATTTT GAAGAGGTTA TTGAGAATAA CATTGGCTGA	2100
GGCGTCGCGC TTGACTTCAA TAACAAATCG AACACCTTCA CGGTTTGACT CATCACGTAC	2160
TGCTGTGATA CCTCAATGC GTTTTCTCTG AACCAAGCGA ACAATATGCT CATGCACCTT	2220
GOTTTTATTG ACCATGTAAG GAAATCTGT TACAACGATA CGCTCACGAC CAGTCTTAGT	2280
CGTTTCAATC TCTGTACGAG AACGTAGGAC AATCGAACCT TTACCTGTTT CATAAAGCCTT	2340
ATGGATACCT GATTTCCCCA TGACAAGAGC ACCAGTTGGA AAATCTGGTC CAGGCAAGAC	2400
TTCCATCAAG TCCTTGGTAG TCACTTCAGG ATTATCCATG ACCAACTTCA CTGCATCAAT	2460
GTTTTCAACC AGATTATGAG GTGGAATATT GGTTCGCAAT CCAACCGCGA TACCAAGTTG	2520
TCCATTAACC AAAAGGTTTG GAAAACGCGC TGGCAAGACC AAGGGTTCCC GTTCATTGGC	2580
ATCATAGTTA TCAACGAAAT CAATGTATT TTTGTTGATA TCAAGAAACA TTTCCAGAGC	2640
AACTCTGCTC ATACGTGCTT CGGTATAACG TTGAGTCGCA GCATATCTC CATCCATGGA	2700
ACCAAAATTC CCATGACCAT CTACAAGCAT GTAAAGGTAG CTCCACCATT GAGCCATAGC	2760
GACCATGGCT TCATAAATAG AGGAATCCCC GTGTGGGTGA TAATTTACCA TGACATCCCC	2820
TGTAATACGA GCAGATTTT TATGGGGTTT GTCTGGGGTC ACACCCAATT CATTCAATCC	2880
GTAGAGAATG CGACGGTAA CAGGTTTAA GCCATCTCGA ACATCAGGAA GAGCTCGCGC	2940
TACGATAACA CTCATGGCGT AGTGATAAAA ACTTGCTTTC ATCTCTTTTG TCAGATTGAC	3000
ATTCACTAAA TTTTATATCT GCATTAATAA ATGCTCTCAT TCACAAATAG TAAGTAACAA	3060
CATATATCCA TAAATTTCCA TCTATTTTCA CCTTAATACC ACTAAACGT TTACATCGAG	3120
AACTATAAGG CATATTCGTG ACAAAGTTT TTAAGAAGTA TAGAATGAAG TTGTCTAGGG	3180
AAACCCCTTA ATAGAAATAG GAGATGGTTA AACAAATGACT CTGACTAACA CACAAA	3236

(2) INFORMATION FOR SEQ ID NO: 181:



1122

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8551 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

AGGTCTGAA GTATTGGAAC AGGAAGGTCA AGAGTTTTTG GAACATTCA AAAAATCTT	60
GGAGTCAGTT GAAGTAGTAG CCATCTCAGG TAGCTCGCCA GCTGGCCTTC CAGTTGATTA	120
CTATGCGAGC TTGGTAGAAC TTGCTAATCA AGCTGGCAAG CATGTAGTCT TGGACTGCTC	180
AGGTGCAGCA CTTCAGGCTG TTCTTGAATC ACCCATATAA CCAACAGTCA TCAAAACAAA	240
TAATGAAGAA TTGTCTCAGC TTCTTGAAG AGAAGTTTCT GAGGATTGG ATGAATTAAT	300
AGAAGTACTT CAAGAACCTT TGTTTGCAGG GATTGAATGG ATTATCGTTT CACTTGGTGC	360
CAACGGTACT TTGGCAAAAC ATGGTGACAC TTCTACAAG GTAGATATTC CTAGAATTCA	420
GGTGGTAAAT CCTGTGGAT CTGGAGACTC TACTGTGGCA GGAATTCTTT CAGGACTTCT	480
TCACAAAGAA TCGGATGAG AATTACTCAT CAAGGCAAT GTCTTGGTA TGCTCAATGC	540
TCAAGAAAAA ATGACTGGTC ATGTCAACAT GGCCAACTAT CAAGCTCTAT ATGATCAATT	600
AATAGTAAAA GAGGTATAAA ATGGCTTTAA CAGAAACAAA ACGGTGACGC TTAGAAAAAC	660
TTTCTGATGA AAATGGTATC ATCTCAGCTC TTGCATTTGA CCAACGTGGT GCTTTGAAAC	720
GCCTCATGGT TAAACACCAA ACAGAGAAC CAAGCTGGC CCAATGGAA GAACCTAAAG	780
TCTTGGTAGC AGATGAATTG ACTAAATATG CTTCACTAT GCTTCTGAC CCTGAGTATG	840
GACTTCCAGC AACTAAAGCT CTTGATGAAA AAGCTGGTCT TCTCCTGCT TATGAAAAAA	900
CAGGTATTGA CACAACAAGC ACAAACGCT TGCCGACTG CTTGGATGTT TGGTCTGCAA	960
AACGTATTAA AGAAGAAGGT GCAGATGCAG TTAATTTCTT GCTTTACTAT GATGTAGATA	1020
GCTCAGACGA ACTCAATCAA GAAAAACAAG CCTACATGGA ACGCATCGGT TCTGAGTGTG	1080
TGGCTGAAGA TATCCOATTC TTCTTGAAA TCCTTGCTTA CGATGAAAAA ATTGCGGATG	1140
CAGGTTCGTG AGAATACGCT AAAGTAAAA CACACAAGT TATCGGCGCT ATGAAAGTCT	1200
TTTCAGACCC ACGCTTTAAC ATTGATGTTT TGAAGTTGA AGTTCCTGTT AACATTAAAT	1260
ATGTTGAAGC KTCGCTGAAG GTGAAGTAG TTATACAGT GAAGAAGCAG CAGCCTTCTT	1320
CAAGGCCAA GATGAACAA CCAACTTGCC ATACATCTAC TTGAGTGCTG GTGATCAGC	1380
TAAACTCTTC CAAGATACTC TTGTATTGTC TCATGAATCA GGTGCGAACT TTAACGAGT	1440
TCTTTGTGGC CGTGCTACAT GGGCAGGATC AGTTGAAGCT TACATCAAAG ATGTTGAAGC	1500

1123

AGCAGCTCGC GAATGGGCCC ACAACTGGAT TTGAAAACAT TGACGAACTC AACAAAGTTC	1560
TTCAAAGAAC AGCAACTTCA TGGAAAGAAC GCGTGTAAGA AAGTCCTCCT AGTTTAGGAA	1620
CATGAATCTA AAAAAATTTA AAAAAAGTTG TATGTAAAGG CTTACAAAAT AACTTACTTG	1680
TGCTATACTT AAATCACAAG TTAATATGAA TTGAAAGTA ACTATATGAA GTATAATAAA	1740
AATAGAGTAT AGTTTATTTT ACAGAGTAGG AAGGAAAAAT ACGGAACAA TATTGCCAGA	1800
ATAAATATA TTTAGATGCA CATTTCATTG ATTGTTTAT AAAAGGAGAA GATAAACGCC	1860
TACTAAAAAG AGTTTAAAG CGTTAGTTGT AGGACTAGGT ATTGTTTCAA TATTCTTATC	1920
AGCCTTACCT ATGGTTAGTG GTTCTGTATT TGCAGATAGT GCCCTAACTA CAGTAGATAA	1980
AGCAATGAT ATTGTTTGA ATGTTGATGG GAATAAATT TATAATGTTT CGGTTTCAGA	2040
AGATATTGTA AATGCTGGTC AAATTTTGA AGATTATTTT TATGTAGATA AATTGGGAAA	2100
TATAAATTTA AAAGGCACTC CTGAAGAGTT AGCAAAAAAT ATGGTATTTT CTGTACAAGA	2160
AGCAAGTTTG ATGTATGGAG CTGTAAAAGA GTTACCCAAC GTTTACGAAA GAGGTCCGTG	2220
AGGTTTTCGT TTCAATCTTG GTCCCTAAGT GAGGGGGATG GGTGGCTGG CTTCTGGAGC	2280
TTTCGCTACT GGAATGCTG GATGGCATTT GAJACAATT GCGGTAAATC CTGTACATC	2340
TGGATTTGTT GCTGTAATAA GTGGTGGAT TGGCTGGCT GTAAAACTG CTGTAGAAAA	2400
TTATTGGACA GTTGCTGTAG CTACAGTAGA AGTGCCGTT GTGAACCTTG TTTACACCAT	2460
AGATTACCT TAGAGGTAT TTCTTTATGA ATCATCTTT TAAAAAATA ACTGTATTTT	2520
GTTTTATAGT TTCTTGTTT CTTGTTTAT TAGACTTAAT GAATTTTAAA AATGTAGCTA	2580
CTTTTATTT TTTCTGTCCT CTGTTTTTG TTTTGATTTA CAAAAATAA TAAAAACAGA	2640
GCCTCGTTT GATGAATTT AGAACATAGT TAAGTTTTAA AAAAGTTGT ATGTAAAGGT	2700
TTACAAAATA ACTTACTGT GCTATACTTA AATCACAAGT TAATACAAG TGAGTGTTAC	2760
TAAGTAATAT TAGGCATGAT CACAGGTGAA TTGAAATCA GCTGATTTTC TAGTTTATT	2820
GTGGTCATT TTTGACTTAT TATACCTTA AGATATAAAA GGAGGTTGAC ATGTATCGAA	2880
TTCTAAATCC AATGAATCAC AATGCTCGC TTGTGAGAAA TGATAAGGA GAAGAGGTGA	2940
TTGTAAATGG TAAGGGAATT GCATTGCGAA AGAAGAGGG GGATTGATTT GCTGAAATC	3000
AGGTTGAGAA AATCTTTGG ATGAAGACCG AAGAGTCCAG AGAAAACTT ATGGCTCTTC	3060
TCAAAGATG TCCGCTTGA TTTATCACAG TGACCTATGA AATCATTGAT AAGCTATCAA	3120
AGAAATATCA TTATCCGATT CAAGAGTATC TCTATGTAA CTTGACAGAT CATATTTACT	3180
GTCTTATCA AGCTCTAAT CAAGGAAGGT ACAAGGATAG TAATCTGCCA GATATTTCCG	3240

1124

CTAAGTATCC TGTCGCTTTT CAAATCGCAA ATGAAGCTTT TGAAATTTAC CGTCAGAAGC	3300
TAGCAGATCA TTTTCCTGAG GACGAAATTA TTGGGATGCG TTATCATTTT ATTAATGCTG	3360
AAGGTGAAAA TGAAGTGGAA CTTGTGGAGT CGATTGATAA GAGGAAAGAA ATTCTCAGGA	3420
ATGTTGAAGA AGTTTAAAG GACTATGCAA TTCAACGAAC TAAAAAGAA AACCATTCTT	3480
ATGATCGCTT TATGATCCAT TTGAATTATT TCTTGGATTA TTAGACAGA TCTAGAGATG	3540
ATAACCAATC ACTTCTGGAT ATGGAAGATC ATATTAACA ATCCTATCCA AAAGCCTTCG	3600
AGATTGCTTC CAAGATCTAT GATGTGATTA CGCAACATAC GGGTCTTGAT TTGTATAAAA	3660
GTGAACGAGT TTATCTAGTT CTACATATCC AACGTTTATT GTCATAAAAA TTTATTTAAA	3720
ACTATATAAG GAGAAATCTA TCATGAATAG AGAAGAAATA ACATTGTTAG GTTTTGAAAT	3780
CGTAGCCTAT GCTGGCGATG CTCGTTCAAA ACTATTGGAA GCCTTGAAGG CTGCTGAAGC	3840
TGTTGATTTT GAAAAAGCG ACGCTCTGCT AGAGGAAGCT GGTAGCTGTA TTGCAGAGGC	3900
TCACCACGCG CAAACAGTC TATTGACTAA GGAAGCTTCA GGTGAGGACT TGGCTTATAG	3960
TGTAAACATG ATGCATGGCC AAGACCACCT AATGACAAC ATCTTGTAA AAGATTGTAT	4020
GCATCATTTA ATTGAACCTC ACAAGAGAGG AGTTCAATAA TGAATAAAGT AATTGCATTT	4080
ATCGAGAAAG GAAAGCCTTT CTTTGAAAAA CTATCTCGTA ATATCTATCT TCGTGTATT	4140
CGTGATGGTT TCATTGCAAG TATGCCGTGT ATTCTCTTCT CAAGTATCTT TATCTTGATT	4200
GCCTTTGTAC CAAACTCATG GGGCTTTAAA TGGTCTGATG AAGTTGTAGC CTTTCTGATG	4260
AAACCTTATA GCTATTCTAT GGGTATCTCG GCTCTCTTGG TAGCTGTGAT AACAGCTAAG	4320
TCATTGACTG ACTCAATAA CCGAGCATG GAAAAAACA ATCAAAATCAA GTATATGTCA	4380
ACATTGTTGG CAGCAATTGT TGGTTTGTG ATGTTGGCAG CTGATCTTAT CGAAAGTGGT	4440
CTAGCTACTG GATTCTGGG GACAAAAAGT TTGCTTTTCA CCTTCTTTCG TGCCTTTGTT	4500
ACTGTAGCCA TCTATAAGGT TTGTGTTAAG AACAACTCA CTATTCTGAT GCCTGACGAA	4560
GTTCACCAAA ATATCTCACA AGTCTTTAAA GATGTGATTC CATTCACCTT ATCTGTGTGT	4620
TCCTTTTATG CTCTTGACTT ATTAGCAGT TATTTTGTG GTTCTAGTGT GGCAGAAATCA	4680
ATCGGTAAAT TCTTCGCACC ACTCTTCTCA GCACGACAGC GATACCTTGG TATTACCATT	4740
ATCTTTGGTG CTTTGGCTTT CTTCTGGTTT GTTGGGATC ATGGTCCATC TATCGTTGAA	4800
CCAGTATCGC CAGCATTTAC CTATGCCAAT GCCGAAGTTA ACTTGAACCT TCTCCAACAA	4860
GGGATGATG CAGACAAAT TCTTACTTCT GGTACACAAA TGTTTATCGT TACCATGGGT	4920
GGTACAGGTG CGACATTGGT CGTTCCATTT ATGTTCAATG GGTGACAAA ATCGAAACGT	4980
AACCGTGCAA TCGGACGTGC TTCAGTAGTT CTAACCTTCT TCGGTGTAAA TGAACCAATC	5040

1125

TTGTTGGTG CACCTCTGT TTTGAATCCA ATCTTCTTCA TTCAATTAT CTPTGCTCCA	5100
ATTGCAACG TATGGATTTT CAAATTCCTT ATTGAACTC TTGGAATGAA CTCATTCCACT	5160
GCTAATCTAC CATGGACAAC TCCAGTCCA CTAGGTCTAG TTCTTGGAAC TAACCTCCAA	5220
GTGCTATCAT TCATTCTGC TGCCCTCTTA ATCGTGGTGG AGTGTGTCA TTAATATCCA	5280
TTCTTAAAG TCTATGATGA ACAAATCTTT GAAGAAGAAC GTTCAGTAA GTCTAATGAT	5340
GAATTGAAAG AAAAAGTTGC TGCAAACTTC AACACTGCAA AAGCGGATGC TATTCTTGAA	5400
AAAGCGGGTG TCGATGCAGC ACAAAATACC ATCACTGAAG AAACAATATG CCTCGTCTC	5460
TGTGCAAGTG GAGGAACAAG TGGTCTCCTT GCAATAGCTT TGAATAAGGC AGCAGCAGAA	5520
TACAATGTCC CTGTGAAAGC AGCAGCAGGC GGCTATGGTG CTCACCGTGA AATGTTACCA	5580
GAGTTTGATC TTGTTATCCT TGCCCTCCAA GTTGCTTCAA ACTTTGAAGA TATGAAAGCA	5640
GAAACAGATA AGCTCGGTAT TAAACTAGCG AAACAGAAAG GCCTCAATA CATCAAAATTA	5700
ACTCGTGATG GAJAGGTGC TCTTGCAATC GTACAAGGC AATTGATTA AGGCTAGAGA	5760
CTCTGAAATA GTCTCCATC GTTACGGAAA TCGTATGGC GAATTTCTTA TTATTAATTC	5820
GTGCGTAAAA AGATATCGTT TTTACCTCCT CATGTACAAA TTGCGTGACT TGGTACAAGA	5880
AGTGAGATGG AGAAGGATGG CTCACTGACT CCTCTCCTCT CACTTTTACT TTATTTAAAT	5940
CAAGAAATAG GTGAAAAAAA TGACAAAAAC ACTTCCAAA GACTTTATTT TTGTTGGCGC	6000
AACAGCTGCT TATCAAGCAG AAGGTGCTAC ACATACTGAT GGAAAAGGAC CAGTTGCTTG	6060
GGATAAATAT CTTGAGGATA ACTACTGGTA CACTGCCGAA CCAGCTAGTG ATTTTACAA	6120
TCGATATCCA GTTGACCTCA AGCTAGCAGA AGAGTATGGT GTCAATGGTA TTCGAATTC	6180
TATTGCTTGG TCAGGTATT TCCGACTGG TTACGGCCAA GTAAATGCTA AAGGTGTTGA	6240
GTPTTATCAT AATTTATTTG CAGAGTGTCA CAACGTCAT GTTGAGCCTT TGTAACTCT	6300
TCATCATCTT GACACGCCAG AAGCTCTCCA CTCAAATGGA GACTTCTTAA ACCGTGAAAA	6360
TATCGAACAT TTTGTAGACT ACCTGCTCTT CTGTTTGTAA GAATTTCCAG AAGTAAACTA	6420
TTGCAACAC TTTAATGAAA TTGGAACCAAT CGGTGATGGT CAATATTTGG TTGGGAAATT	6480
CCCTCCAGGT ATCCAGTAGC ACCTTGCCAA AGTCTTTCAA TCACACACCA ATATGATGGT	6540
GTCTCATGCA CCGCGGTTAA AATTGTACAA AGAGAAAGGC TATAAAGGGG AATTTGTTGT	6600
TGTTACAGCC CTGCCAATA AATATCCTCT AGATCCTGAA AATCCAGCAG ATGTTCTGTC	6660
AGCTGAGTTG GAAGATATCA TCCACAATAA ATTCATCTTA GACGCAACTT ATCTAGGTCG	6720
CTATTAGCT GAAACCATGG AAGGTGTCAA CCATATCTTA TTAGTCAATG GTGGTAGTTT	6780

1126

GGATCCTCGT GAAGAAGATT TTACAGCATT AGAAGCTGCA AAAGACTTGA ATGATTTCCT	6840
AGGAATCAAC TACTATATGA GTGACTGGAT GGAAGCCTTT GATGGAGAAA CTGAAATATAT	6900
CCATAATGGT AAAGGTGAAA AAGGAAGCTC TAAATATCAA ATCAAAGGTG TTGGTCGTCG	6960
TGTAGCTCCT GACTATGTAC CACGCACGGA TTGGGATTGG ATTATCTACC CTCAGGTTTT	7020
GTATGACCAA ATCATGCGTG TGAAGAAGA TTATCTTAAAC TACAAGAAGA TTTACATCAC	7080
TGAAAATGGT CTCGGCTATA AAGATGAGTT CCGTGATAAC ACTGTTTACG ATGATGGTCG	7140
TATTGATTAC GTGAAGCAAC ACTTGGAGGT TTTATCTGAT GCGATTGCGA ATGGAGCTAA	7200
TGTAAAGGTT TACTTCATTT GGTCAATTAT GGATGTCTTC TCATGGTCAA ACGGTTATGA	7260
GAACGTTTAT GGTCTCTTCT ACGTAGATTT TGAAGCTCAA GAACGTTATC CTAAGAAATC	7320
AGCTCACTGG TACAAGAAAG TAGCGGAAAC TCAGATTATA GACTAGTAGA ATTAGTCATT	7380
AGATATAGAA TTTTAGTGAG TCAAAAAGAT GTTCAAAGAT TTTATCCAACT CTATTATGA	7440
AAAAAGCTTT ATATTATAAA TTTGCAAAA TGCTCTCAAA TACCGTGTTT GACGAGTGAA	7500
GAATCGAAAA GTCTTGAAA ATGGTATGTC TCGACTGGTA AAGAATGGAT TTGTCAATCA	7560
GATGATGAGC TGGGAAGAAAT TAAAAATCTA TTTTTAAATT TTATCAATCC TGAAGAATGG	7620
GATACTATCT CCTTTGATTC AGATTTTATG CCGTTTCAAC AATCGTAACC AATTTCCTCA	7680
AAAAAGTAAA TCTTATATTT AGTACTCTGT AAAACTCTTA TCTAATCAGC TTGCTTATAC	7740
TCAATGAAAA TCAAGAGCA ACTTTAACT AGGAAGCGAG TCGCAGATTT CTCATGCAT	7800
AGCTTTGAGG AATTGGGCAA AAAGTCTTTG ATATAGAAA ACGCATAGTA TCAGGTGTTT	7860
CAACACCTGA TACTATGCGT TTTATTGTGG GAAGATTAC TTTTCTCTT CTGAAATTGA	7920
GTGTGTTACCC AGGCTCTTTC AGTTTATPAA GGCTTGATGA CTTTAATGTG TTTAGATAGC	7980
TTAAAAAGGA TTGAATCACT TAGTTTAGAA TCTGAAACAA TAGTATCAAG ATTTGATACA	8040
TTATAAAAAG TATAAAAATC AAACCTTATG AACTTGCTAT GATCTGCGAG TAAATATTTT	8100
TTATTAGAAAT TATTTAAAGC GATGCGTTGA GCCTCTCCTT CTTCCTCGCT AAAAGTAGCT	8160
AGAGCTCCGT TTTGAATACC ATTACAGCTA ACGAAAGCTT TAGAAAATTG GAGATTAGAG	8220
AGATTTTGTG GGGTCAATGT ACCAACAAAA GCACCTGTAA TATCGCGATA ATTTCCACCT	8280
ATTAAAAACA AATCTGTAA TTTTCGTTTC GTTAAATCA GAAAAACAGG TAGACTGTGT	8340
GTTACGACGC GGATATTGTC AATAGGCAAC TCACGCGCAA AAAACTCTAA TGTGTTCCTT	8400
GCTCCAAATGA AAATAGTTTC TCTTCTTCTT ACTAGACTGC CTGCAAAAATG GGCTATTTCT	8460
TGTTTTTCTG CCGTTTGGAG GGCTTGTTT TCAATATTTG ATCGCTCATT AGTCAAAAGG	8520
GAGTTGGTTC GAAGTTTTTC AGCTCCACCA TGCAACGAA TCAGCAAACT TTTATCAGCT	8580

1127

AAATTCCTGTA AATAGCCGCT TGCAGTCATA TCTGAACCG CTATTCGTIC CATAATCTGT 8640  
TTAACTGTTA T 8651

(2) INFORMATION FOR SEQ ID NO: 182:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 3786 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

AATCTCCAAT CAGTGCCACT TCAGCTACAA AGAAGAGGAG GATAATAACT CCGTTCACAA 60  
GGACAGACAA GAATAATTGA TAGAAGGAOT CGGTTTCACT TGCTTGACTT GGTCTTGTAA 120  
TGATWTGGAG ACTGGCAAGC AGAATGATTTC CAATGCTAAT CACACACAAG AGGGCTGTAA 180  
ATCOTAGGCT ATCAAAGAAA GCAAGAAAC TAGCAATAGC AGTGAGGAAG ATTGGAATTG 240  
CCAAGAGTTG ACTATATTGT TGGAGAACCT TGTCTAGCGT CCAGTCCCTT TCCGTGTGGA 300  
TAAATCGTCT CACACGAAA CTACCCAAGA GGAATGAAA GAAGAGAGT GTTGTGCGTA 360  
CTAGGATAGA GATGATAGAA AAAAGAGTTA AAGGAGCTAG CTGCTCAGGG AAGCGACTGT 420  
TAATGCTTGC TATATGTCCA TAGTAAGCAT GTTTGATGTG ATAGATACTA AAGAAAAAAG 480  
AAGATGCAGA AAACAGAAAT AGCAAGAGAA AGGCTGTGTA ACTGTGTGTG ATACTTGTGT 540  
CCAATCTACT TGTAGGAGAT TTGATCGCTT CCACTAGCCA AGACCAAAA TCAAGCACCT 600  
GCTCTTTTCA TTTATCCCTA GATTTTGGAG CTTGTGCGGG GATATAAGGA CTTTCTAAAG 660  
ATTTACTGAT AAGAAAGTGC TCTTTCGTGG TTGCTTTTTG CTGAGGAAGA GCTTCTTGCC 720  
TCTCTTCAGC TATATGACT TTTTCTGTTT CTTTAGAAAG GTCTGGCTCT TCTTCAGTAG 780  
AATTAGATGC CTTCTTTTCT TCTATTTCTG TTCTCGCTTC ACTGTCTTCA GGAGCTTCAA 840  
TTTTCTCTTC TTGCTGGCTT TCCAATCGA CTTCAAGCTG AGGGAGCTTC TCCTCTAACT 900  
GAGTATTTTT TTCAATTGAT GTATCGAGAT CGGCTATCGT TTCTTCAGCC TTGCTTGCAA 960  
CCTCTTGAGC TTGCTCTTCA GGCTGTCTCT TGCTGTGTGT TTTTACAAA TCATTACTTT 1020  
CAAAACATTC TTGTTTCATG GTAGAACCTC CTTTTTGTGT AGATAAATAT GTTTCCATAG 1080  
TAGCAAAATG AAGCGTTTTT GTCAACGTCT GCTTGTGTGT GATATTAGAT CAATATTATC 1140  
ATCAGATCTC GCAATGAGTT GATCCTTGAC ATCGGTTTTT TCAGTTTTGT AAGGGTTGCT 1200  
TAATTCGGTA CCTCTTGATT CAGGCTTTTC TCTTGTGAA TGAAGATAG AACCATAGTT 1260

1128	
GCTTGAGATG TCCAGTTAA TTCTTTGGCT TTCTTTCTGG TCTAGGATGA TTCTGAGATA	1320
ATCTTTGGCA GTACAGTTCAA CCTTGGCAATG GACTTTGGATA TTTTCAGCGT GGAAGTGATT	1380
CTCTGTTGAC TCTAGCTGAC TATCTGTAAAG AACTGTATCA AAGATATTAA CGATATTGGG	1440
CGTTGTGAGT TTACTGTTTT TGATAGCACT TCCTTCAATT CGAGAGATAT AGCTGTTTTG	1500
ATTGAGGGTC GCATTTTCAA GGCTAGCAAT TATGATGGTG GTTTGTCCGC GATTGGCTGA	1560
GATGTTGATC CCTTTTAGAG TTCTCCCTTT TGGTAGTGG AGAATAACTT CTTCAAAACG	1620
ACTAGAGTAG CTACTTGCGA TATGAAGAAT CCCACCAATT CCAGAAGAGA GAAACGGAGT	1680
TTCAGACAGT TTCTTATCAG TGAGACTCAG AGTTCTATCG TTCTGATGG TGATAAGATC	1740
ATGGTAGACA GAAAGAGATG GATGGTAAGA AATGTGGATT TGATCATCGA AAGAGTCTGT	1800
GATGTTGAGC GTGTGTGCT GGAGAGTAAT TTCTAGGTTT TCGACTTCCT TGCCAAAGGT	1860
TAGCTTTTCC GPACGGCTAT CATAGACAGG TTCTTTGGAC ATGGAAAGTA GCTCTTTAAT	1920
CCCGTCAGAT TGGATACCTA CAAAAGCAG GATAAGCCG ATAACGGTAG TCACCACACC	1980
AAAGATGAGA AATCCTTTTG TCCATTTAAG CATGCTGATT ACCTCTCTTT CTTTTTTTAA	2040
GAACAAATG TACCAGACGA ACAATGAGTA GACCGAAGAA GCGAGTTGCA TAGGAATATC	2100
CAAGTAAAC TAGCGAAGAA GCACCGATAG CCAGTAAAC AGAACCAAA ATCAGATAA	2160
AGGCTGATTT GGCTTGGCGC AGGACAGTGA AACTTTCAAC TAAAAATAG AATCCGCCGA	2220
TGATACCCAG TATGGAAACT GCAAGAAAG CCAGAATGAC AGTCAAAGCG GCTACAAGAA	2280
TTGCGAACAG GGTACGAGG ATGGCGATT CCGAGGGAAT GCGGATAGGT GCTGCAAGGA	2340
GGGCTAACAA GCGGATATGT AAAAATTTGTC GGTATTTTTT TTGAGCGCGT GCTTCATTGA	2400
TTTTTTTATC GAGAAGATG GATAGAACTT CATTGGCCGC TTCTTTCCGA GTTCCCAAAC	2460
TAGCGATGAG TTCTTCTTCT CTTGAGACTC CAGCATCGTC AAAGAGCTCT CTGAAATAGT	2520
CCATGGCTTC GATACGGTCA GCTTCAGGTA GTTTCTTTGAG ATAGAGTTCT AGCTGATGCA	2580
GGTATTTCAGT TCTTGTCATG GCGGATACTC CCTTCTATGA TGCCATTGAT GGTGTCTGTA	2640
TAGAGTGCC ATTCACTCTT TAGGGTCAAG AGCTGCTCTA TACCACCGTT TGTCAAGGAG	2700
TAGTATTTGC GCATGCGACC TTGGAACCTCT CTAGAAATAG TTGTCAAGAA GCTATTGCTT	2760
TCCAAATTTT TGAGAAATGG ATAGAGTGTG GATTCTTTGA TATTAGCGAT CAGCTTAATG	2820
GTPTGGCTAA TCTCATAACC ATAGAATCA CCTGCTCCA GTACAGCCAA GATGAGAAAT	2880
TCAATCAAG CAGAGGATGT TGGAAGTAC ATGGGAAACC TCCTTTTCTA ATGTGTAAGA	2940
TTTTTATATA TAAATTTTCT ACACATACAT GTTACATCTA AAAGAAAGCC CTGTCAAGAG	3000
AAATGTGTA AATTTTATATA TATAAAAAAC TTCTAGCTAA AACTAGAAGT TTAAAGGATC	3060

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TTATCCGCTC	TGTCCAGTGT	AAAGAGGGCC	ACAGTCATCA	CGATATCGAT	GAGCAAGAGG	3120
GCAGCTACAG	ATGGTACCCA	AGAGTGGAAC	AGGTCAAAAC	TGTAACCAAA	GAGGGTTGGC	3180
CCAAAGGCTG	CTAGGATATA	GCCTCCTGTT	TGAGATAGGC	CGGACAAATTG	GGCTGTCTTT	3240
TCAGGGGCGC	TTGTCTTGAG	TGAAAAGTTG	ACCATGAGAT	AAGGGAAAGAG	GGCACTGGTT	3300
GCGGTTCGGA	TGAGGAGATG	GATGGCAAGC	CAGTAAATGA	AATTATTGAT	TGGGAAAAAG	3360
AGCATCGAAA	TGCCGACCAC	ACCAGCTAGT	GAAACCAAGAG	TGAGCATGAG	CTGACGGTTG	3420
CGAGTAGATA	AACTGGTTGT	CAGGCTTGGG	ATGGTCATTG	AAAAAGGAAT	GCTAATCAGA	3480
GATAAGATAG	AAGTCAGCAA	GCCAGCTTGG	TGACTGGATA	GACCTGCATG	GATAGACATG	3540
GTAGGTAACC	AGGTCAATGAC	GGTGTAAAGG	ATCAAGGATT	GAAAACCTGA	AAAGATAATA	3600
ATTGCCCAAA	CCTGTTTATT	AOCGATGACC	TTTATTTGAC	TTTTTTGTCT	GGTTTGTGGA	3660
GCTAGTCTAT	GATTATAGCG	GTGATTTGGG	AGCCAGACCA	AAAAAGTTGC	TAGACAGAGT	3720
AACGTGAGGA	GAAGGATAAG	TCCTTTCCAA	GAAGTGGCTT	GTGTAAATGG	CACAGCTAGA	3780
TAGGAA						3786

(2) INFORMATION FOR SEQ ID NO: 183:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3054 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

TCAGCTAAAA	AACATTGCTA	AATTGATTGA	AGCTGGTGCT	ACACATTCGG	ATTCAACTTC	60
TCACACGGCG	ACCACCAAGA	ACAAGGTGAG	CGTATGGCAA	CTGTTAAACT	TGCGAAGAAA	120
ATTGCAGGTA	AAAAAATTGG	TTTCTTTCTT	GATACAAAAG	GACCTGAAT	CCGTACAGAA	180
TTGTTCGAAG	GTGAAGCTAA	AGAATATTCA	TACAAAACGT	GTGAAAAAAT	TCGTCTTGCA	240
ACTAAACAAG	GAATCAAAAT	AACTGCTGAA	GTGATTGCGT	TGAAGCTTGC	TGGTGCTCTT	300
GATATCTATG	ATGATTTTGA	AGTTGGTCGT	CAAGTTTGGG	TTGACGATGG	TAACTTGGT	360
CTTCGTGTGG	TTGCTAAGA	TGATGCAACT	CGTGAATTG	AAGTTGAAGT	TGAAAACGAT	420
GGTATCATCG	CTAAACAAAA	AGGTGTGAAC	ATCCCTAACA	CTAAAAATCC	TTTCCACAGT	480
CTTGCTGAAC	GCGATAACGA	CGATATCCGT	TTCCGCTCTT	AACAAGGTAT	CAACTTCATC	540
GCAATTTTAT	TCGTACGTAC	TGCMAAGAT	GTGAACGAAG	TTCTGTCAAT	CTGTGAAGAA	600



		1130		
ACTGGAAACG	GACATGTTCA	ATTGTTGGCT	AAAATCGAAA	ACCAACAAGG
TATCGATAAC				660
TTAGATGAAA	TCATCGAAGC	AGCTGATGGT	ATTATGATTG	CTCGTGGTGA
TATGGGTATC				720
GAAATACCGT	TCGAAAATGT	TCCAGTTTAT	CAAAAATGA	TTATCAAGAA
AGTCAATGCT				780
GCAGGTAAAG	TTGTTATCAC	TGCAACAAAC	ATGCTTGAAA	CAATGACTGA
AAAACCAAGT				840
GCAACTCGGT	CAGAAGTATC	AGATGTATTC	AACGCTGTTA	TCGACGGAAC
TGACGCTACA				900
ATGTTGTTCAG	CGGAGTCTGC	AAACGGTAAA	TACCCACTCG	AATCAGTAAAC
TACAATGGCT				960
ACAATCGACA	AGAAACGCTCA	AGCTCTTCTT	AATGAATACG	GACGCTTTGA
TTCAGATTCA				1020
TTTGAGCGTA	ACTCTAAGAC	AGAAGTAATG	GCTTCTGCTG	TTAAGATGC
TACTAGCTCA				1080
ATGGATATCA	AATTGGTTGT	AATCTTTACT	AAGACAGGTC	ATACTGCACG
TTTGATTTCCT				1140
AAATACCGTC	CAAAATCTGA	CATCTTAGCA	TTGACATTTC	ACGAATTGAC
AGAACGTGGC				1200
TTGATGTTGA	ACTGGGGTGT	TATCCCAATG	TTGACAGATG	CTCCATCTTC
AAGTCACGAT				1260
ATGTTCGAAA	TCGCTGAACG	TAAAGCGGTA	GAAGCAGGTC	TCGTTGAGTC
AGGCGATGAT				1320
ATCGTTATCG	TTGCTGGTGT	GCCAGTAGGA	GAAGCTGTTT	GCACAAACAC
AATGGGTATC				1380
CGCACAGTAC	GTAAAGAAAA	ATATAAAAAAC	CTATCATATC	CAGCTTTAGA
GCTTTGCTGA				1440
TAGGCTTTTT	GTATAGAGGG	TAAAGAAATAG	GCAAAACTTT	CATAATGGAT
TGATACTCTT				1500
CGAAAATCTC	TTCAAACACAC	GTACAGGCTCG	CCATTCCGTA	TATATGTTAC
TGACTTTCGT				1560
AGTTCTATCT	ACAACCTCAA	AGCAGTGCTT	TGAGCAACCG	CGGCTAGCTT
CCTAGTTTGC				1620
TCTTTGATTT	TCAATTGAGTA	TGAAMTAAGA	TATGCACAAA	TTGATTAGAA
AGTCAAATGA				1680
ATTTCTACAA	ATGTTTACG	AATCGTAATG	TACTTGTCTA	GATTCGATCT
GATATATTTT				1740
CGATTAAATG	ATATGGTATT	TAAAACTCC	AAAGTAGGCT	ACTCCATTCT
TTTACTTACG				1800
TGAGTGTAGA	TGTTATTTAC	TGTTTTAGCG	TTTTTGNGTT	CCACTTAAC
CATATAGCA				1860
TTCTTCTCAG	CTAGTGTACT	AAGGAGTGTC	TGCTTGAAA	TATCGGAAC
AAGGGCTCG				1920
TTTATCGGTT	TCCTTAGTTT	AGTATTTGCC	TTTTCGAAAG	TGATCTTAAA
TGCTTTTCCT				1980
TAAATTTACA	TATCACTATT	GTTTAACAAA	ATCTAATCTA	TTTTAGGTCA
CTTATCTTTT				2040
TTTTGAAATG	TAGAAATGAC	TTTTTCAAAAG	TTTTTCGAAT	CTTTTAAAAAT
CTGTTTGCTT				2100
TATATCGCCA	TTCTCCCCCC	TTTTTTAAAT	CTCCCTATAT	AGCCTGACAG
CTTTCCCGAT				2160
GGTACGAATA	TGTTGCTTTT	CGTCTAGGTC	GATGTCGGGG	TATTCGGGAT
TGAGTTTTTT				2220
TGAGGACGCC	TTGGCGGAGT	TTCTTGACAT	AGTTAGTGCC	GTCTACTTGG
AGATGCCGA				2280
TGCTATATATA	GATCAATCTGT	GGGGTATTCT	TGATAAATAG	GTAGTCGCTG
TTTCTTATCT				2340
TTGGCTCCAT	GGACTTGCTG	ACGACATAAG	CGATTGGGTC	GTAGTCGCTC
GCGATAATGG				2400

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AAACTCCATA TCTAAATCGT TGTCTGCAT CGAGCGGCTA CCTGCAGAGA TAAACTACCT	2460
AACAAGAGAG TAAGTAGTCT GTCTGTAGTC GTCCAGTCTG ATGATTTTGA CGATACTTCG	2520
TTTTTCTGAT CATACAGTTG CCTCTCGGCA TAGGTCAGAA CTTTACCTTG TCTGGGTGGT	2580
TCCCGTTGGT CGTAGATAGA TTGGATATCG CTAGGAGAAT CCTTTTGAAC TGGAGGAAG	2640
AGGGCATCGA TCAAGCTACT GANTACTTTA ACTAAGTCAA ATATAGTATT TTCTTAGTA	2700
GACCTAACCC TTTTTCATA ATTTCTAATG GTGTTTTTAC TTATACCTAT CTAGTACCC	2760
ARTTCTTATT GAGTCCAACC ATTACTAGTC TATATTGTTT TATAGTTGAT TGAGTTTGGG	2820
ATAGTAGCGT GTAGCTGCTA AAACATTCTT AGAAATTAAT TTGACTTTCC TAATAGAGTT	2880
GTTCATATCT TATTTCATC TATTATGTTT TTCACCTCTA ACAATCGCAA TCTCTTCTTT	2940
ATCCATGAAT GAAATCGCTT TCTATTTTGG TAAGTAAAGC ATAACACGAA ATCCACGAAA	3000
ATGAAACCTT TTGTTGTGTT TTCGTAAAAA ATTTGTTGAC AGAGCACGAA ACGC	3054

(2) INFORMATION FOR SEQ ID NO: 184:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 1590 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

TGTGATTTTC yGAAAAATTG GTAAAAATATA TCTTAATCAT TTTTCAGSAGG ACAAATAATT	50
GACAAGATAT CAGAAATTAG TAAATGGAAA ATGGAAATCA TCTGAACAAG AAATTACGAT	120
TTATTACACCA ATCAATCAAG AAGAATTGGG TACAGTTCCA GCCATGACTC AGACTGAAGC	180
TGATGAGGCT ATGCAAGCTG CGCGTGCAGC CCTGCCAGCA TGGCGAGCTT TATCAGCAAT	240
TGAACGTGCG GCTTATTTTC ATAAAAACAG AGCTATTTTA GAACGCGATA AGGAAGAAAT	300
TGCTACTATC CTTGCCAAAG AAGTAGCAAA AGGGATTAAA GCAGCAATTG GAGAAGTAT	360
GCCTACAGCA GACTTGATTG GTTATGCTGC TGAGGAAGGT TCCGCTATCA CTGACAAGC	420
AATGGAAGGT GGTGGTTTGG AGGCAACAAG TAAAAACAAA CTGGCTGTTG TCCGCTGTTG	480
ACCAGTTGAT ATCGTGTAG CGATTGCTCC CTTTAATTAT CCAGTTAATT TATCTGCTTC	540
TAAAAATGCA CCTGCCTTGA TTGCAGGAAA TGPGGTGATG TTTAAGCCAC CAACACAAGG	600
TTCCATTTCT GGAATCTTGT TGGCTAAAAA ATTTGAAGAA GCAGGGGATTC CGGCAAGTGT	660
TTTCAACACC ATTACAGTCT GTGGTTTCAA AATTGGGGAT TATATCATTT AGCACAAGAA	720

1132

AGTCAACTTC ATCAACTTTA CAGGTTCAAC TCCTATTGGA GAACGTATTG GTCGTTTACG	780
TGGTATGCGT CCTATCATGT TGGAACTTGG TGGGAAGAT GCAGCTCTTG TACTAGAAAG	840
TGCAGATTGG GAACATGCTG CCAAGCAAAAT TGTTGCGGGA GCCTTTAGCT ACTCAGGACA	900
ACGTTGCACG GCCATTAAC GTGTCATTTGT TCTCGAAAGT GTAGCAGATA AATTAGCTAC	960
TTTGCTTCAG GAAGAAGTTT CTAAATTAAAC AGTTGGTGAT CCATTGACA ATGCTGATAT	1020
TACACCTGTT ATTGACAATG CTTCAGCCGA CTTCAITTTGG GGCTTGATTG AGGATGCACA	1080
AGAAAAAGAA GCTCAGGCTC TTACACCAAT CAAACGTGAG GGCAATCTTC TCTGGCCAGT	1140
GCTTTTTGAC CAAGTTACAA AAGATATGAA AGTGGCATTG GAAGGCCAT TTGGTCTGT	1200
TTTACCAATG ATTGCTGTG CTAGTGTAGA GGAAGCTATT GCCTTTGCCA ACGAATCTGA	1260
ATTGCGCCTT CAATCATCAG TCTTTACAAA TGATTTCAAA AAAGCCTTTG AATTTGCTGA	1320
AAAATTTGAA GTAGGTACAG TCCACATTA TAAATAAAACC CAGCGTGGT CAGATAATTT	1380
CCCATTTCTT GGTGTCAAG GTTCTGGAGC TGGAGTGCAA GGAATTAAT ATAGCATTGA	1440
AGCGATGACA AATGTCAAAT CCATTTGTTT TGATGTGAAA TAACGTGTAA AACGAGAAA	1500
TTGTTTCTCT GGTTTTATTT TTTTGCTATA AATAATAAT AATTATAGAA AAAATACGAA	1560
CTTTTGGTA TTATAATAGA TTGAAACCGG	1590

(2) INFORMATION FOR SEQ ID NO: 185:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 4848 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

CCTGCAGTTG TCAGACCTGT AATTTCTTTT TTATCTGTAA TAAGAAATCGT TCCAGCGCCT	60
AGAAAAACCA CACCTGATAT AACTTGAGCT CCTAATCGTG TAGGATCTCC TGTCCTCAAT	120
TTATAGATA CGTATTCATT CGTCATCAT ATCAAAACATG CAGCTAGACA AACAACTACTA	180
TAAGTTTCGA TGCCCTGACG CTGGGATTTG CTCCCTCTCT CTAACCAAT TATACTACCA	240
ATGACTACTG ATAAACAAT CCTGACAACT ATTCAATAT TTGATAACCC AAGACTAGTG	300
GCTGTCATGA TTATTTCTTT ACTTTACGCC CCGGTCTTTG TGTGAAGTAT AATACCGTTC	360
CAGAAATAAT CATCAGAACA ATTGATATAA CAAATACCA AGCTTGTCGA TTAGATGTTG	420
CTGTTTCTAT ACCTGCAGAT CGAATCGTAA TACCTAATGG TTGAGCTAGG GGATGGTAAA	480
GGAATACAGA TAAGTCGAAG TCAGTTAATA AAGAGTTAAA GTTTAAAGCA ATTAACAGAGA	540

1133

GAACAACCGG TAAATAAAT GGAATGATAA CCTTCATCAT AGTATAAAAA GGTGAAGCAC	600
CCATACTTCT TGCTGCATCT TCCATCTCAT CATCAACACT AAATAAAAA GCACTACCA	660
TTCTATAAGA AAATGGGATT TTTFACACTA TATATGCAAT AAGTAGAATT ACCAACTAC	720
CTACCAAAT CTGATTCAG ACAAGAAAT GTGGCTGATT AAAAGTAAAT AATAACTTA	780
CTGCTTAAAG TGFACTTGGT AGTAACCAAG GAAGTAGAGC ACCATATTCA AATAAGAAAT	840
CAAAACGAGA TTTATGTTTT CTGACAACG GAGCAATAC AACTGCGAGA ATTGTTGCTG	900
TTGTGCGAGC AATAATAGAA TAAATAAAGC TGACCAAGAA TGGAGAGAAT GCGGCACTAT	960
TACTAAAGAA TAAGGATATA TTTCTAAAG TAAAGTTTGA TAATGTTAAG TTACCTGTTT	1020
GAATTGCAAC TGGATCTGTA AATGAGTATA ATACTATAAA AATTAGTGGG AGCATGAAAA	1080
CTGTGAACAA TCCATATGCT ACAATGTGAG CAATGATATT CCAAGGCTTA GACGCAATTT	1140
TTTGTTTTTT AAGAGGCGCT TTAGTCTTAG AGATAGAAA ATAAATTTCTA CCTTTTCTA	1200
TCTATTTCAT GATAGTAAGC AAAATGTGAG TTGCAATACC TAAATAAAT GCAAGTAGGG	1260
CAGCTAAATC ACGAGAAATC CCCATCCCTG CAAATGTAAT AATCATTTGA TTTATAGTTT	1320
GAATTTCTTT ACCACCAACA ATCATGGGTG CTGCTACTGC AGATAAACCA CTAAGAAAAA	1380
CCATAAATAGT AAGTGCAAAAT AGAGTTGGAA TTAAGGTTGG TAACACTACT TTTTCGAAAA	1440
CAGTAAATGG TTTTCTCCC ATATTTCGAG CAGCTCAAT AGTGTGATAG TCAACGCTTC	1500
GAATTGTATT TGTTAAAAAC AATGTATGAT TAGCAGTTCC TGAAATATGC ATAATGAATA	1560
AGACTGCACC ATACCAATA AACCACTAG GGTCTAAAGA AGGATAACA TTTTGTAAAA	1620
ATTTTGTAAAT CAATCCATAA GGACCATAGA CAAATTTATA TCCAGTCGCT AAAACCACTC	1680
CTCCATAAAT TAAAGAGGTC ATATAACCTA ATTTAAAAAT TTTCAGCCT TTAATATCAA	1740
AGTACTCTGT AAATAGAACA CAAAGAATAC CTACGACATT AACTGTAAAT ATGAGTGAAT	1800
ATGCTAACTT AAAACTGTTT ATAACTACTT GAAGTGCCCT CTGAGATTTT AGAACACGAT	1860
GTACAGCATC AAGGAAAAAT TCTCCTCCTT TTACAAATAC ATTCACTACT AGATCAAGAT	1920
TTGGATAAAT AATAAATGTT ACTAAGAAC AGATTAAACC TAAACGAATA AGCCAATCTT	1980
TTAAATTTAA TTTATGACGC ATACTGCACC TCCTTAAAT TGCAGAACGT CTGATGGTGT	2040
GATAAATAAAT TCCACACTTT CTCGACAGA TCTAATAGCA GCCTGACTAT CAATACTTGT	2100
TACATTAAGA ATCTGACTTT CAGAAACTTT TATTGTATAG TGAATGTAA CTCCAGAAAA	2160
CTCAACATCA AATAATTGTC CTTTTAGAAT AAAATCTGTG TCAGTTTCAC GATTGAATCG	2220
AACCTTCTCT AATCGAATGT ATCCTTTTTT ATCCTCTAAG AAAACGCTTG TATTTTTCAA	2280

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TAATACTTCG TGGACTGTTT CATCGGTCAA AACATTAATA TCTCCAATAA AATCACATAC	2340
AAATTCAAGTT TGAGAATTAT GATAAATCTC TACTGGTGTA CCGACCTGTT CGATGTATCC	2400
ATTGTTAAAG ACTGCAATTC TATCAGATAA AGTCAAGGCT TCCTCTTGAT CATGAGTAAC	2460
ATATAAAGTA GTAATACCTA ACTCTTTTGG AAGTCTTTTC AACTCTTTTC TCAAACTAC	2520
ACGTAATTTT GCGTCAAGGT TTGACAAATGG TTCATCTAGA CAAAGAATTT TAGGTTCAAG	2580
AACCAGAGCA CGAGCCAAATG CTACCCCTTG TTGTTGACCC CCAGATAAAT CTGATACATT	2640
ACGCTGAAC TGTGTATCAG AGATCTTAAT TTTTGTGCCC ACTGCTGATA CTTTACGTTT	2700
AATAACATCT GGAGCTACCT TCTTAACTTT TAAACCAAAAT GCAATATTAT CAAAAACAGT	2760
CATAGTTGGA AATAGCGCAT AAGATTGAAA TACAATACCA ATTCCACGCT TTTCAGTTTC	2820
CAAAATGAGTG ACATCTGTTT CATTAACTTC AATACTTCCT GATGATGGAT CTAGAAAACC	2880
TACCAATGCT CTCAAAGTAG TTGATTTACC ACATCTGAA GGCCCAAGAA ATGTAAAAAA	2940
TTCCCTCTCA TGTAATACCA AATTACAGAT ATCAATTGCA ACAAAATCAC CATATTTAAT	3000
TTGAATATTA TCAAAATTAA TCATCTCACT AACTCCCTCT ATTACTAAAC CAAAAGCCTC	3060
TCTTTATTTT TTCCATAAAT TTGAAATAA TAGAGAGACT TGGACATAAA AATTAACTCT	3120
TATTTCTTAT TGTACGTATT CTAATTCAAG TTTTCTTACC CATTCATCCA AATGCTTTCC	3180
AACAGCTTCC CAGTCAATAT TTTGTGGTTT CACTTGATCA ACAAAATTCT TCGTATCTTC	3240
AGGTAGATCT TTGAGGCGAT CTTTATTTGC AOGAATAGAT CCAAAGTTCT TACTATATTC	3300
TACTTGAATT TCTGATTGAC CAAACCAATC AATAAATCTT TTAGCTAACG CTTGTTTTTT	3360
ACTAGTGCTT AAAACCATAG TTTGTTCAGT TACAAATGGT ACACCAATCT CAGGAGTCACT	3420
AACCTTGAAA ACAACATTTT GTTCTTTTTG TCCAATTAAT GCACCAGAAC CCCACATCAT	3480
TCCATATTTG ATTGGATCTT CTTTGTCTAA CATCTTAACA ATTGAACTTT CTCCTTTTTG	3540
AGAGTGATAT GCATTTTTCA AATATCTTTT TGTACTTCCC CAACCTTTTT CGGAAACACC	3600
TAAITCACCT TTATCATCAA GGTATCGAAC TAAGTACTTT GCTAGAATTG CCGTCCTGT	3660
ACCTCCTTGA AGACAGAAA TTGAATATTT ACCTTTATAC TTAATACCTA ATTCAATCCA	3720
ATCTTTAGGC APTTCTTTTA CATCAGGCGC CCCAATTAAG ACTAATGGTT GAACAATCAC	3780
AGGATTATAA TAATTAATCTT TATCTGATAA AGATTGATCA ATTTTATCTA ACCAATTAGG	3840
CTTGACTGTT ACTAGTAATT TTTGATCTCT AATTTTATTT GAATCAACAG CACCAATTCC	3900
AAATACCACTA TCTGCAACTG CATTATTCTT CTCAGCAATA ACACGGTCTG CTAATTGAGC	3960
GCCAGCGATA TCAACCATTT TTATATTAAA ACCAGCTTCT TTTGCTTTAG CAGTTAACCA	4020
ATCACCACGA CCATTTGAGA CTGAGTTCGA ATAGATAACT AATTCTTGAC TTTTATCAGC	4080

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TTTTTCTTCA GATGAAGAAG CAGTCGTAGA ATTGGAACCT CCAGAGCAAG CAGCAAGTGT 4140
AGTAAgAGCA ACTCCCGTTG CAAGTACAGT AGACCAAACCT TTCAATTTTT TCATGATAAG 4200
TTCTCCTTTT TTACTATTTT ATTTAAATTT TTGGTGATAT GGAACAAATT GTCATCATATC 4260
TTCAAATACA GTATAGTCAA TACGGTTTAC AGTAATAGTT GGAATCTTCT CTAATAAAT 4320
TTCAGTTAAT TCTGCTCTGA CTTTAGTAAA CTCTCTCTCC TCCTCTTCGG TTAGAGGAAT 4380
CCGAAGATAC CCAATTGAAA TATGGAAATT ATATCTATCA TGATTAGGGA AACAAACACC 4440
TGCTTTTCTC GAGACATAAG TACGAATTC TTCTAATCTC TTTCAGAAAG CTTCATCTGC 4500
AGGTTCAACT AGTATGTTTT GTTTTCCCAT TTCAGTTATA CGCATATGAA TTTCTTCATC 4560
CAACAATGGA AAAATTGCAA GTTGTTTAGC AAAGTAAATCA TGTATTTCTT GTAAAGGTGT 4620
ATCTAGAGGA AGATTACTGC TCCAAAACTC gttCACGATT TTCATGGCAC AACAAATCAA 4680
TTACAGTCAT GTGAATAGAA TTCCTTGGAG TTAAGTAAA CTTATCGATA AATGGTAATT 4740
CTCTATAACG TGATTGAATA ATATCAACAA CTTCATCAA ATCTGTGTTA GTATAAAGAT 4800
TTGCTACAAc TGTATTTCCA GGGAAATGAT TAAATTCCCC ATTCCTCG 4848

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(2) INFORMATION FOR SEQ ID NO: 186:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3763 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

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GTTATAAGCA ACACCTTCTT GCTTGCCATA AGTTGAGAAA TGGGTAGAAT CGATATCTAC 60
AATGAGTTGG TTTAGCTGGT GAAACTGTAA AAAGAATTGC ACCAATTCAA GGTGAGGCA 120
TCGCAAACTA TGGACTGTTT CCTCGTCAGT TCTGAAAGA AAACGGGATA AGGTTGGCTG 180
TGAGCAGAGC TGCCCTCCTT CCAATAATTT TGGAAAGTAG GCATCAGCTG ACAATCTCTT 240
ACAAGCATAG TCCGTTCCAT AACCTGTAA CAGTTGAAAG AGGAACCTGA CAAGGATATC 300
TGAAATCCGA TAAAGACAGT AGCGGCGTTG GTCATTCGTT ACTAAATACT TAGAAATCG 360
CTCTTTTAGT TTCAACTGGG AAAAAAGTTC CTGAAAAAAG ATAGAGCCAC CATACTGGGT 420
TAAATGACCT CCATCGAAG ATAGTTGGTA AAAAGACTTG TTTTGGAGT GATGATTGG 480
TAAACTGTTT ATGAGGTTT CCTTCTTTT TGTGTTTTT TCTACACTTA TACCATAAAG 540
GGGAACTCTT TTTTGTCTA GTAAAAACA CCCATGGGT GAAAAAGAA ACCATCCAG 600

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1136		
ATCTAAGCTA AGGCAAGGAT TCTGGATGGT TTTTAGATTT GGGCTGAATA ATTGGGGATT	660	
TAGGAGAAAT GATGGTATCT TCCAAATCAA AATCAACTTC ACTCCATAGT CTCAACTGAT	720	
TGATTTTCCC ATCTTGATAG GTCAATCTCT TGTCAAGGAT AACTTGAGTC AACACCTCAT	780	
GTTGACCTTG ACACCTGATG TCATCTACCA AGAGCCAGAT ATCCTCTACC AACATGAGGA	840	
TTTTTCTCCT GTGAAGATAA GSCAAATCAG GTTCTGCTGA CCAATAAGCC CCCCAATAT	900	
AATGCACTCC CTCCTTTCT TTAATGGTAC AAAACAGGGA GTGAGGATAG TATTCAATAT	960	
CCGAGGATCC CGTGATTCTT TCCGGAGCTT TCCCATCTAC AATGCAAGTC GAATGACTCC	1020	
AAGCACTCTT TAAGAGATAA CGTTCATATA TCTCCCGATA AGAATAACGC CCAGCATCTA	1080	
TGAAAATAGG TTGGCCTTGA TACTGTAAAG AAAAATAATT TCTGTCACCT TGAATATGGG	1140	
CACCTCCTAG CGGACCATTT TTGAAAATA GATAACGATG TTATCTCTTA ATGCAGACAT	1200	
GTCCAGAGTC TTCAAAGATC ATGGACTTAG GCTGCCAAGC TCTCTTTTCA AATTCTGCA	1260	
GTCCCTTAC CTTTTCTCCG CCCAGGAACA AGAGGCTAAG CAATCAACT TTAACATCCA	1320	
GACCGTTAAG AAGGTCTTCC TGGTTCAAAA CCACAGCAGA CAGGCTCAA ATTTCTGTGC	1380	
TTTCTGTAGA ATCGTATCA CCAAAAGCCA AAGTCCGTCC ATCTAAGCCT GTCATCATTT	1440	
GAATATAGGT CGCATCTTT TCCAGCAACT CTGGTAACT ATCTTGCAAG TCTGGAAGCA	1500	
AGAGACACAA ATCCAGCAAG GCTTTATAAA CCTCTACATG ATAGAGAATC GACTGTTCAA	1560	
ACTGGCTTCC ATCTCTAAA ATCTGTGTCT CAATTGCTG TTCAACTCC TCTGAAGCAA	1620	
AATGGTAAGC TTCTCTAGA TCCATCTTAT CTGAAAAGAA ATGATAGATA GCAAGCATCG	1680	
GAATTGTTTG TAAAATCCCC CAGTTACTAA GGGTGFACTT GGGCGGATAG TAGCTTTTCA	1740	
TAAAGTCAAT CTGCTTTTCT AGACTGACCA AAATTTTCTC TAGTTCTTTC TCCTCTAGCA	1800	
AGTCAAATTT CAAGAGGAGC AAGAGTAGTT TCAACCAAGT AAAGGAACGA ATACCCGTAT	1860	
CCAAGGTTCT AGTCATCAAG GATTGAGGAG AAAATTCTCT CACCTGCTCA ATCCAATCAA	1920	
ATAGAAAGAA CTTCGACTTT TGAATATAGT CCTTATCTCC TTCTACCAGA TACCCATATCA	1980	
TAAACTGCAA GAGATATTTT TGTGATTTGA GCATATAAGA CCAATCTGGA TCATCTTCAA	2040	
ATACTTGATC CCATACCATC GGCTGGATTT GATGGATTTT TGAACAAGGC TCCATATCCC	2100	
AAGGACTATC AAACATAAAA CGATTGTCCA TCAAGCGTTC AAGGGAACCT TTGACTTTCT	2160	
CATAGCTTTT TGAACAGTGC GACAAGATAT AATCACGACA TTGATTTCOA TCGACTCTTT	2220	
CAAAAAATTG TCTTCTTTCT TCTTTCATTA TCTATTACCA GAAAAAAGAC TACTTAAAAA	2280	
GCAGTCTCTT TGTCTTTCCC ATTACACTTT CCTTTTCTAC ATGGATGACC ACACTTTTGG	2340	
CAATCTGCAA GGAGACCAAG TCATCTTGA TAGAAATGAT TTTTCATGA ATTCAGACA	2400	

1137

ATAACAACAC TTCAATCACCA AATGTTAAAG AAGCTAAATA CTCTGTCGT TGCTCCATCT	2460
GTTTGCAGAG CAACCTTTTGC TGACGAATAG AATGAAAGCT TGACAGTAAA AGGGGACTCA	2520
CTGCCAAGAC AATCACTATT CCATAAACA ATGTTGTATC CATTAAAGCTA TAATCTTAAG	2580
CCAGCTTCCG ATAATTCCGA TGATAACTGT TAAATAAAG AGTTTATATG TTGTCCATTT	2640
CTTTTCTTTG ATCAAGTAGT AACTAAAAG TGTAAATAGC GCTCGTAGAA GAGCTGGAGC	2700
AACCTTATCA AGCATTCCCT GAATACTTAC GATACTTTGT TTAGCGTCTG CTTTAACTTC	2760
CCCTGCAGCA AAGGTAAACG GCACCAATAAT CTTAACAGAT GTGCTGCCA AACGAGCAAT	2820
TACGLTACAC CGATAATATT GGCAAATCGA GAAATCGTGT CCATCTGTTC GCTTAGTTTA	2880
TCAATCACAG TTGTCCTAG TTTGTATCCA TACAGACCAG TTGACAAATT AATCGCTGTT	2940
AAAATCGTAT TCATCGCAAG GAAGAACAAG ATTGGACCGA CAACCAAGCC TTCTTGAGCA	3000
AACGAAGCTG CGATGGTGA GAACAATGGA GCTAACAGA ATTGAGAAAG AGAATCCCCA	3060
ATACCTGCCA ATGCTCCCAT CAAGGCCATC TTGATGCTAC GTGTTCTTT TGCCGGACGG	3120
CCATTTTCCA ACATTACAAG ATGCAAGCTG GTAATAAAA GCAGGAAGTG TGGGTTGGTA	3180
TTATAGAAAT CACAGTTTTC TTCCAAGGCT TGGTAGAAAC CTTCCTGATC CTCTCCATAG	3240
TGTTTTTTCA AAGCAGGATA CATCAATTC GCATATCCCA ACCCTTGATA GTTACTATAG	3300
TTAAATCCAT TTTGACAAA GAATGCCCGC AAAGACGTTT TANGATATATC ACGTTTGTGT	3360
AATTTGTTAG ATCCAGTCAT CGTGTGCTTC CTCCTTACC ACATGATCCG CTGTTTTTGG	3420
CTTGTTATAA AATTCAATCA AAGCAAAGAT AGTACCTACA ATTGCAATAC CAATTTGTTG	3480
GATGTTTAGA TAAGCTGCAC AAACATATCC CAACAAGACA AAGGGAATCA ACTCTTTCTT	3540
AGCCATCACT GACAAGATCA TCGCAAAACC GATAGCTGGG AGCATTTTAC CAGCAACTGT	3600
CAAACCTGTA AGTAATACCG GTGGAATGTA GTCTACGAGT TTCAACAGG TATTCATTGA	3660
AAGGGCACCA AGCAACCCAA GGTAAATCCA ATAAAGGCAA ACAACCAAT TGTTCATTT	3720
AGAGTGAAC TAAATTTCTT CAATTTATGG TTTTCAAGT GCT	3780

(2) INFORMATION FOR SEQ ID NO: 187:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5053 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:



1138	
CAATCTCTGA GTATGTGCGG TCAATACTAw CAAAGGGAAT yCCTGACGTC AAGTAATGTT	60
CAATTGGmCT ATAGCTAATG GCAACCACTC CATCAACTTT ATTATGACGC AACATCTCCA	120
GATAGTCTTG CTCTCTATTT GTACCATTGA TAGAACATAA GAGTAATTTG TTATTTCTCT	180
TATAGACTTC ATTTTCCACA TGCATAGCAA ATCTGAAAA GAAGGGATGC CAGATACTTG	240
GTACAATGAT TGCAATCGTT TCTGTTCGAT TTTTTCAT TCCCTCAGCG TAGTAATCTG	300
GAATGTAATT CAAAGTTTAA ATCGCTTGTT CCACCTTTT CAAAGTACT TCTTAAATGC	360
CTTTTCTTTT ATTAATTACA CGTGAACAG TTCCAACT AACTCTGCT TCTAAAGCAA	420
CATCTTTCAT GGTAAATGAT TTTCTTTGTT CTACCATATT ATCACCCTCT TTCAATATAT	480
AGTATCATGC AAATGCTTTT TAAGCAACTA TTTCTCAATC ATTTTGGCC AGATCAATTA	540
TCCCATCATG AATAAAATCA CTCCAATTAG CTTTGAATAA TACTTCAATT TTCAATGTGA	600
AACATCTACA TAAACAGGA AAGCCTTGG TTTCTGGCT TTTTCTAT CTTCTATAAA	660
AAAGCAAGA GTTTTAGATG GCTATAAATC TAGATGACA TTTTCTTAA ATGATGTGAG	720
GTCTTTTCTT AACAAAAACA CCCCCAAAT TAGACTTTTT CTGTCTAAT TTTGAGGTAC	780
AGTTCAAACG CGAAATAGCG TTTTCTGTT ATTTTGGTT ACTCATCTAA TCGAATAAAC	840
ATCATGGCAT TTAACAAGTA TATGAGTGAG ACCGTGTTA TATTATTGGA ATAGATGAGT	900
CTCTTATTTT CAATAGGAGG AATAATAAAA TTAGAAATAA TGATATCATA AGGTGAATCT	960
TCTAAAGATT CCTTGTATAA TTCTAATTCA GTCCAACTT CCAGTTCAAA ATTATTGCTA	1020
CAATTAATAAG AAAGTGCTC TGCACGAAT TTTCTAGAT ACTGATCAAA ATTACTCATA	1080
ACTAAACCT TTAGTTTAGG CTGATTTGT AGCAATTA TCCACAAATG TTTGGTATGA	1140
GTGATGAAGG TATAAGATAG ATGATTACC ATCATTGAAC TAGAACAAAC CTCAGAGTC	1200
TCTAAATAGT GAGAAAGCTC TTTTATTATA TCTGAACAA ATTTTGGAAA AATATTTTGA	1260
AAGTTCCTGA TTGTATTCCT TTTTGTATCA AATAAAATAA ACTCAGTAAA CAATCTTGA	1320
CGATACAGAT GTCCGGTATT ATGCAGATGC CAAATCAGAT TATCCTTATT CTCCATTCTA	1380
ATCTGATACT TGACTGAAAT CTGATCAATA AAATCACTCA ATAGATGGTA AGATTTTCTA	1440
ACATAACTAT CCTTTTTCAC GCATTTTATA AAGAGACTTT CATCTATGAA AAACAATTTT	1500
TGAAATGTAG ACACAAATAA TTGGCAACA ACTTCTCAT CTAAAGAGAT ATTGTATTCT	1560
GATTCAAAC TCTGAGCAAC ACCTTCTATT CCTTCTGCT GCATTAAAA ATCCAACTT	1620
TGGTCGTTAA AAGAATCTTT ATCTACTTCC ATAAAAATGC CAACTTTTAT TCTATATAGG	1680
TTCTGTACTA GGAGCAACTT TAGCATTTCTA TGCGTTGACA AATTCAATGG AAAGCTTGTT	1740
TCCCTATAAA CCAATTTCTAA CAATTGAGAT AGTGGCTCTG ATGAAAAATT TTCAATGGC	1800

1139

CATTCTAGGA AATAATATTT TTCTGAAAA TATTGTGCAA AAAAGTAACG AATGCTCTC	1860
TCATTTCCAA TGATTTGAAC AGGGGTCAGA CTAACCTCAA ATTGAAATG CTTTTAATC	1920
ACTTTATTGA TTTGGCTAAT AATACGATAG AGCGAAGATG AACTGATATA AAATTCCTTA	1980
CAATACTCT CAGCTTGACA ACCCTCATT AAGAAGATGA ATTCATAAAT CGAAAAATGA	2040
GTTGAATGTT TAAAGAAATG ATGGTAAGCC ATTTCAATAT CACTATCATC GGTATTAATA	2100
ATGCGTATAC CATTAGTAGA AGAATGAAA ATCAAGTCAG GAAAAGCAGA TTTAACATGG	2160
GATACATCAT CTTTGACTGC ACGTTCGTGA CAATTTAATA ACTCTGCTAG TTCAGAACGA	2220
TGAAACCAAC GTTTATGTTT AAATAATAAT TCTAATAATT CTAATTGCCT ATGACTTTTT	2280
TTAGATAATA AATCTCTCAT GAATATCTTT CTCCTTTAT AAATTATCGG ATTAACCTC	2340
TTGCAATTAT ACCACAAGA ATAGGTATAG CATGATATA CGACTTTTCC TAAATCTTT	2400
TATTTGCTAT AATAACACTA CGGAGACAAT ATATAACAA TTTTCTTATT TTACCGTCTA	2460
TTGAGGCGTT GATACAGAA TCAATTCAA GTCTAAGAT TATATTTTAA ATTTTAAAAA	2520
TTATATAATA GCAACAATTA AAGAAATTGA TTTTTTAAAA TTATATAATA ATAACAATCG	2580
AAATAATTGA CTTTCTATA TTAAGTTAT AATAAGTAA TAATCAAGA AATTGATTCT	2640
TTGATATTAA AATAAAAAAG GAGGGTAGGC AGTGTTGTGA TCAATTATTG CTGGAGGTCT	2700
TATTGGTCTC TTGGCAGGTA AATCACTAA AAAAGTAGTT CTATGGGAAT CATCGCAAT	2760
GTATTCGCTG GTTTAGTGGG GGCATATGCA GGCAATCTC TTTTAGGTAG TTGGGGTCCA	2820
GCAATCGCTG GAATGGCTTT GCTCCATCT ATGTAGGTG CAGCGATTGT GATTACTGTA	2880
GTGTCTCTCT TTACAGGTAG AAGTAAACT TTTCGCAAGT AAAGTTAGCA AACTATTTTT	2940
AAATCAATGA CGGGAAAAAT AGTTTAAATG TTAATCGAA AGGATTGTAT ATGTCAAAG	3000
CAAGAAAAT ATGTTTCATT ATTTCTGTGA TTTTAATCTT GACAAATTTTCT TTTCTGTT	3060
TGATAGATTA TCATCAAGTT AGTGATCTAG GTATTCATCT ACTTAGCTGG AGACAGAACT	3120
CGGTAGTTGA ATTCTATCTT GCTAGATATG TCTTTTGGG GACAGTGGTT CTATCAACTT	3180
TAGTTTTTAT ATCCATTTTA GTGTGTATGT TTTATCTTAA ACGTTACTTG GAAATCCAAC	3240
TTGAACTTAA AACGATACA TTAATAATTA AGAATTCGGC AATCGAAGGT TTTGTTAGAA	3300
GTTTGTGTGAG TGATCATAGA TTGATCAAGA ACCCAACTGT TCATGTAAAT TTACGAAAAA	3360
ATAAATGTTT CGTTCATGTA GAAGGTAAAA TTCTTCTCTC AGACAACATC GCTGACAGAT	3420
GCCAAATTAAT TCAAAATGAA ATAACATAAG GATTGAAGCA GTTTTTGGGT ATTGAGCGTC	3480
AAGTAAACT TGAAGTTGCA GTAAAAAATT ACCAACCAAA ACCTCAAAAC AAAAAGACTG	3540

1140

TTAGTCGTGT GAAGTAAGGA AGTAAAAAAT GGAAATGGCTT AAACAATATC GATATCCAAT	3600
TATCGCTGGT CTCATAGGCG TATTTCTGGC TTGTTTGATT GTCTCCTTTG GCTTCTTCAA	3660
AACAATATTT GTATTGATTT TAGGAGCACT GGGAGTTGCA GCTGGATTAT ATATCGAAAA	3720
AACTATATATA GATAAATAAA AAAATAAAAA TTACTAAATTT AATTAAGAAG GTTTCATATG	3780
TCAACACGAAA AAAACACAAA CACTAACGTA GAAAAAGAA AGCTACTAGT TGTAGCTCAC	3840
GAAATCAAAAG GGGAACTTAC TTACGAAGAT AAGTTATCC AAAAAATCAT TGGTCTTTCA	3900
CTGAAAAAGC TTTCAGGTCT TTTGGGAATC GATGGTGGTT TCTTCTCAAA TCTTAAAGAA	3960
AAAAATCOTTA ACAGCGATGA CGTAACAAAT GGTGTTAAGC TAGAAGTTGG TAAACACAA	4020
GTTCAGATTG ACTTAAACGT TATTTGTGAG TACCACAAAA ATCTTCAGC TTTATATTCA	4080
GAAATCAGAG AAATCGTATC TTCAGAAGTT GCTAAAAATGA CTGACTTGA AATTGTTGAA	4140
ATCAACGTAA ACGTTGTCGA CATCAAAACT AAAGAACAGC ATGAAGCAGA CTCAGTAAGC	4200
CTTCAAGATC GCGTATCTGA CGTTGCTGAA TCAACAGGAG AATTCACITC AGAACAAATTC	4260
GAAAAAGCTA AATCTGGTCT TGGATCTGGT TTCTCAACTG TTCAAGAAAA AGTTAGCGAA	4320
GGTGTAGAAG CTGTTAAAGG TGCAGCAAAAT GGTGTAGTAT CTCACGAAAA CACTCGTGTA	4380
AACTAAGATA AATAAATAT AACAGSAGAA ATTATCATGT CAGTAGAAGA AAAATTAAAT	4440
CAAGCTAAAG GTTCTATTAA AGAAGGTGTT GGGAAAGCCA TCGGTGATGA AAAAATGGAA	4500
AAAGAAGGTG CAGCTGAAAA AGTTGTTTTCT AAAGTAAAAG AAGTTGCCGA AGACGCTAAA	4560
GACGCTGTAG AAGGTGCTGT AGAAGGTGTT AAAACATGTT TGAGTGGCGA CGATAAATAA	4620
GGTTAAAGAT TACTTTATCT TTTTAGTAAT ATTAGTCAAA AGAGTCTGAG TCAAGATGAT	4680
TCTCAGAAAA CAAAAAGCTA GAGATTCCCA ATTGCGGAAC TCTAGCTTTT TAATTTTGCC	4740
TCTTTCTCTT ATTATATTTT AGCAGGTTGT TGGCCATGAG TACGAATCCC ATGTCAATTC	4800
TCACCTTGACG CTTACTCTC AGATGACATC TCTTATAACC CAAACAAACC TTTATCTGCC	4860
CAAGACAGA TTTCATATCA ATCTTACGTT TAGCGAAAAT TTGTCTACCC TTGGAAGATA	4920
AAAGTGCGCTG ATATTCTTTTA GTTTTAAAC ACTGGTAACG TCTATTCATA TACAGTCTCT	4980
TTTGAGGGGC TGATTCAAGT TCATAATCGC AGTCAACATT GATTTCAAGG CTGTTTCCTT	5040
TCTATCTCCC CGG	5053

(2) INFORMATION FOR SEQ ID NO: 188:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 6492 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

AATTCCTCTT TTCCACAA AATGTATGAC CTGCACCTGA ATACTCTCA TGTTTGTAC	60
ATTCACTAC TTTCATAAA TCTTTTACAA AATCATAATA TGACATAACA CACTATCCCT	120
TTTAGACAAT ATTCCAATTA GCTTATTAA TTCAAACTA TGTATTAGT AATTATAACA	180
GATGTATAAT AGAAAAGCAA TGATAGATAT TATCAATTAA GCGAATTTAT ATCTAAAGG	240
GATATTAAG AAAGGAGATA TGCTTATGAA GATTTACAAA AAACATTTTG CTTATGTCCA	300
AGATAAGAAA TATCTTGGGG TTTGGCCAT AATTTTTCT GCTATATCTG CTGCACCTAC	360
AGTATATGGA TATTATTTAA TCTACAAATT TCTAGATAAG TTAATAATTA ATTCAAACCT	420
ATCCGGTGCA GAGAGTATAG CATTAAATC TGTATTACA CTAACAAGTG GAGCGATATT	480
TTATTTTGTG TCAGGAATGT TTTCACTAT CTGGGATTC AGGCTTGAAA CAAATTTAAG	540
AAAAGGGaA TCGATGGTCT GGAAAAGCA AGTTTGTAGT TCTTGACTT AATCCATCT	600
GGTCAAAATA GAAAGATTAT AGATGCAAT GCTGCACAAA CTCATCAGGT GGTAGCACAC	660
ATGATTCCTG ATAGTTCTCA GGCAATAATC ACACCCGTAC TTGTAATTCG ACTTGGCTTT	720
ATAGTAAGTA TAAGAGTTGG CATTAATTTG CTGCTCTTA CTATAACTCG TGGCTTAATT	780
TTAGGGGCAA TGATGGGCGA GCAAGAATT ATGAAGATAT ACCAAGAAAT CCTATCTAAA	840
CTAAGTGCTG AAACGTGTA GTACGTGAGA GGAATGCAAG TTGTAAGAAAT ATTTAAAGCA	900
AATGTAGAGT CTTTAAAG CTTTATAG GCGATAAAG ATTACTCAA GFATGCTTAT	960
GATTATTCCC TATCTGTAA AAGGCCATT GTTTGTATC AATGTTATT TTTTGGACTG	1020
ATTGCAATTT TAATTATTC TATAGTTTAT TTTATGACTA GCTTAGCTAG CGCAAAGGTG	1080
ATTTTACTG AGCTTATCAT GATTTTATTT TTATCAGGAG TTCTCTTTGT TTCAATTCATG	1140
AGAAATGATGT GACTCCATG TATATTCTC AAGGAAATTA TGCAATAGAT ACTTTAGAGG	1200
CGCTTACGA AGATATGCAA AAGACAAAT TAGTGCATGG TAATGTCAAT AATTTAAAA	1260
ACTATAATAT AGAATTTGAG AATGTTAGCT TTGCTTATAA TGATAAAGCT GTCAATGAAA	1320
ATTATATCTT TAATTAGAA GAAGGAAAGT CCTACGCAT TGTGCGTTCA TCTGGATCAT	1380
GCAATCAAC AGTAGCAAAA CTTATATCAG GTTTTACAA TGTTAATAAA GGAAGCATAA	1440
AGATAGGCGG GATAGCAATA AGTGAATATT CTGACGAAGC CTTAATTAAG GCCATTTCTT	1500
TTGTTTTCAT AGATTCAAAA TTATTCAAGA AGAGCATTTA TGATAATGTA GCGTTAGCTA	1560
ATAAGATGC GACGAAGAT GACGTTATGA GAGCCTTAAA ATTAGCAGGA TGCGATTATA	1620

	1142	
TATTAGACAA ATTCCCAGAA AGAGAAAATA CAATCATAGG CTCAAAAGGT GTTTATTTAT	1680	
CCGGTGGAGA AAAACAAGA ATTGCAATTG CTAGAGCAAT TTTAAGGAT TCCAAAATTA	1740	
TTATTTATGGA TGAAGCATCA GCATCTATTG ACCCAGATAA CGAGTTTGAA TTGCAAAAAG	1800	
CTTTTAAAAA TCTTTATGAAG GATFAAACAG TTATCATGAT TGCACACAGG CTATCTACAA	1860	
TTAAGACCT TGATGAAATT ATGTCTATGG ATAGTGGAAA AATTATAGAA AGAGGGTCTG	1920	
ACAAAGAAAT AATGTCAAAA GATACAAGGT ATAAGAGCCT GCAGAGATG TTTAACAGTG	1980	
CGATGAATG GAGGGTTTCA AATGAAAGAG TTTTATAAAA AAGATTTTGC TCTTACAGAT	2040	
GGAGGAGCAA GAAATTTAAG TAAAGCAACA CTGGCTTCAT TTTTCGTTTA TTGTATAAAC	2100	
ATGCTTCTCG CCATATTACT TATGATTTCT GCTCAGGAAG TTTTGGAAAA TATGGGCAAA	2160	
AGCAATGGCT TTTATATAGT ATTCTCAGTT TTGATTTTGA TAGCAATGTA TATTTTGCTT	2220	
TCTATCGAAT ACGATAAATT ATATAACACA ACCTATCAAG AAGTGCAGA TTTAAGAATA	2280	
AGGACAGCGG AGAATTTATC AAAATTACCT CTATCTTACT TTCTTAAACA TGACATTTCC	2340	
GACATTTTAC AAACAATCAT GGCTGATATT GAAGGCATAG AGCATGCAAT GAGCCACTCA	2400	
ATACCAAGG TGGGCGGCAT GGTACTGTTT TTCCCATTAA TATCTGTAAT GATCTAGCG	2460	
GGCAATGTCA AGATGGGTTT AGCTGTAAAT ATTCCATCTA TTTTAAGCTT TATATTTATA	2520	
CTTTTATCTA AAAAATATCA GGTAAATGGA CAGAAATGAT ATTATGATGT CTTAAGAAAA	2580	
AACTCAGAAA GCCTTCAAGA AARTATCGAA ATGCCAATGG AGATTAAAGC ATATAATTTA	2640	
TCGAAGGATA TTAAGAGTGA CTTATATAAA AAAATGGGAG ATAGTGAGAA AGTACACTTA	2700	
AAGGCGGAAG TAACTACAAT TTTAAGCTTTG TCTATATCTT CAATATTTAG CTTTATATCT	2760	
CTTGCTGTTG TGATATTGCT CGGCGTAAAT CTAAATTATA ATAAAGAGAT AAATTCCTCT	2820	
TACCTTATAG GATATTTACT AGCTGCTATG AAGATAACAG ACTCTTTAGA TGCATCTAAA	2880	
GAGGGCTTGA TGGAAATATT TTATTTATCG CCCAAATGAG AAGATTAATA AGAATTTCAA	2940	
AATCAAGATT TACAAGAAGG CGATGACTAT AGCTTAAAAA AATTTGATAT TGATCTAAAA	3000	
GATGTTGAGT TTGCCTACAA TAAAGACGCA AAGTTTTTAA ATGGTGTAAAG TTTTAAAGCT	3060	
AAGCAGGGAG AGGTCACCTG TTTGGTAGGT GCAAGTGGCT GCGGTAAAAA AACTATCTTG	3120	
AACTTATATAT CAAGACTTTA TGATTTATGAC AAGGGACAAA TCTTAATCGA TGCCAAGAT	3180	
ATAAAGGAAA TATCAACAGA ATCCCTTTT GATAAGGTGT CTATGTGTTT CCAAGATGTG	3240	
GTCTCTCTTA ATCAAAGCGT TATGAAAAAT ATTAGAAATG GTAAGCAAGA TGCAAGTGAC	3300	
GAAGAGGTTA AAAGAGCAGC AAAACTTGCA AATTGACAGG ATTTTATAGA AAAAATGGAT	3360	
AAGGTTTTCG ATACAGTTAT TGGTGAAAAA GGAGCTGAGC TATCAGGAGG AGAAGACAA	3420	

AGATTATCAA TAGCCAGAGC CTCTTAAAA GATGCGCCGA TATGATCTT AGATGAGATA	3480
ACAGCAAGCC TTGATGTATA CAACGAGAAA AAGATTCAAG AGTCTTAAA TAATTTAGTT	3540
AAAGATAAAA CTGTTGTAAT CATTTACACAT AGAATGAAAT CCATAGAAAA TGCAGACAAG	3600
ATAGTAGTTC TTCAAAACGG AAGAGTAGAA AGCGAAGGTA AGCATGAAGA GCTTTACAA	3660
AAATCAAAA TTTACAAAAA TTTAATAGAA AAGACAAAAA TGGCAGAAGA ATTTAATTAT	3720
TAGGAGGACT ACAATGGATA ATAAAAAATT AAAAGTAAAA GATTTAGTAA GCATCGGTGT	3780
TTTGGCGTA ATTTATTTTG CCTTCATGTT TGGAGTTGGT ATGATGGGCT TGATTTCCAT	3840
ATTGTTCTTA ATATACCCGA CAGTATTAGC CATAGTTGCA GGAACGTGTG TTAGTTTATT	3900
TATGGCTAAG GTTCAAAAGC CATGGGCACT ATTTATATT TGGATGATAT CACCACTGTT	3960
GATGTTTGCA GCTGGTCATA CCTACGTAGT TGTGGTTTAA TCACCTATAG TAATGATAAT	4020
AGCAGAAATTA ATTAGAAAGA TTGGTAATTA TAATTCATTT AAATPACATA TGCCTTCTTA	4080
TGCAATCTTC AGCACATGGA TATGTAGCTC TTTAATGCAA ATGCTTTTAG CAAAAGAAAA	4140
ATATATGGAG TGGTCTTTGA TGACTATGGG AAAAGATPAT GTTGATGTA TAGAAAAGTT	4200
AAATACTTAT CCTCACATGG CTTTAGTAGC CTTAGGTGCT TTCTTAGGAG GAATTCCTGG	4260
AGCATATATA GGCAAGGCTC TATGAAAAA ACACCTTTCA AATGGATPAT ATTGTGTGGG	4320
ATACTTACT CCTTGCCTAA TTTTATGGTG CTATCTGAAT TAAACCCAT AGTTAAGATG	4380
TTTTTGAGTA TACCTATTGT TATTAGAAAT TTTATTTTAC CATTTATGGC AGCAAGCTTT	4440
ATGATAAAGA CCTCGGATGT AGGCGCAATA ATTTATCATG TGGATAGCT TAAGATTTC	4500
AAGAATGTAT CCATACCTAT TGGCGTTATG TTTAGATTCT TCCCATCTTT TAAGGAGGAG	4560
AGAAAAACA TCAAAATGGC TATGAGAGTA AGAGGGATAA ATTTTAAAA CCCAGTCAAA	4620
TATCTTGAAT ATGTTTCTGT GCCACTACTC ATTTATCATAT CTAAATATATC AGATGACATT	4680
GCAAAAGCGG CAGAAACAAA GGCAATAGAA AATCCAATTG CCAAGACCAG ATACATTGCG	4740
GTAAAGATAC AGCTAATTGA TTTTGTATT GTTTAGCGG TTGCTGACT TATTGTGGGA	4800
GGCTTAATAT GGTGGAATA AAAAATTTAA GTCTTGATTA TGGTGAAGAG CATATATTAG	4860
ATGATATTTC ACTATCCATA GCCGAGGGAG AGTCCGTGCT ATTTACAGGA AAAAGTGGAA	4920
ATGGTAGTTC ATCTTTAATA AATTCAATCA ATGGACTAGC TGTAAAGTAT GATACGCAA	4980
AGACAAAGGG CGAAATAATT ATTGATGGTA AGAATAAAA AAATTGGAA CTTTATCAAA	5040
TCTCAATGCT TGTTCACATP GTTTTTCAAA ATCCTAAGAC ATATTTTTTT AATGTCAATA	5100
CGACATTAGA ATTATTATTT TATTTGGAAA ATATCGGTCT TCCAAGAGAA GAGATGGACA	5160

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GGCGTTTGAA	GGATATACTT	GAGATATTCC	CGATAAAAA	TCCTTTGAAC	AGAAATATAT	5220
TTAATCTATC	CGGCGGTGAA	AAACAAATTC	TTTGCAATTGC	AGCTTCTTAT	ATAGCAGGTA	5280
CAAAGATTAT	AGTTATGGAT	GAGCCTTCAT	CGAATTTAGA	TATTAAGAAGC	ATAAGTGTTT	5340
TGGCAAAGAT	GCTAAAGATA	TTAAAAGAGA	AAGGCATAAG	CATAATTGTT	GCAGAGCATA	5400
GAATTATTAT	TTTGATGGAC	ATAGTGGACC	GTGTATTTTT	AATAGATAAA	GSAAAGCTTA	5460
AAAAAAGCTA	TACTAGAAGT	GAATTTTTAA	AGCTAGATAA	AAATGAATTA	AATGCTTTAA	5520
GTTTAAGAGA	TAAAGAATTA	AGTAAATTAA	AAGTTCCTTA	TTTAAAAGAA	GGTGGAGAGT	5580
ATCAGATAAA	AAATCTTAGT	TACAAATTTA	CTGATGATGA	GTGTTTAAGC	TTAAAAGATA	5640
TTTCGTTTCAA	GCTTGGGAAA	ATTTATGGCA	TAAATAGGATC	CAACGGACGA	GGAAATCAA	5700
CGCTTTTAAG	ATGTTTAAAT	GTCCTTGAGA	AAAAATCAAA	AGAAGAAATT	TATTTTAAGG	5760
GAGAGAAGCT	ATCTAAAAAA	GAAGAGCTCA	AAAACCTCTC	ACTTGTTATG	CAAGATGTAA	5820
ATCATCAATT	ATTCACAGAT	GAAGTATTCA	ACGAGCTTAG	ATTAGGAGTA	AAGAATTTTG	5880
ATGAAGAAAA	GGCGAAATC	ATTTTAAACC	CCAATTATTC	ACCCCAAATC	TAAAAACCAT	5940
CCAGAATCCT	TGCTTTAGCT	TAGATCCTGG	ATGGTTTCCT	TTTTACCCCA	ATGGGTGTTT	6000
TTTACTAGAC	AAAAAAGAGT	TTCCCTTTTA	TGTTATTAAGT	GTAGAAAAAA	ACACAAAAAG	6060
AAAGGAAACT	CACATGAACA	GTTTACCAAA	TCATCACTTC	CAAAACAAGT	CTTTTTACCA	6120
ACTATCTTTC	GATGGAGGTC	ATTTAAACCA	GTATGTGTTG	CTTATCTTTT	TTCAAGAACT	6180
TTTTTCCCAG	TTGAACTATA	AAGAGCGGAT	TTCTAAGTAT	TTAGTAACGA	ATGACCAACG	6240
CGCTACTGTT	CGTTATTTCG	ATTCAGATAT	CCTTGTCGAG	TTCTCTTTTC	AAGTGTAAAC	6300
AGGTTATGGA	ACGGACTATG	CTTGTAAGAA	ATTGTCAGCT	GATGCTACT	TTCCAAAAAT	6360
GTGGAAGGA	GGGCAGCTTG	TTCAAGACCA	ACCTTATCCC	GTTTTCTTTC	CAGAACTGAC	6420
GAGGAAACAG	TCCATAGTTT	GCGATGCTTC	AACCTTGAAT	TGTCGAATT	CTTTTTACAT	6480
GTTCAACAGC	TG					6492

(2) INFORMATION FOR SEQ ID NO: 189:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7174 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

AACTGAAGGT AAAGGCTTCG ACGCAGAAGC TGACGCTGCC CAAGCTGCC TTGATGACCT 60

TAAGAAAGCT	CAAGAAGACA	ACAACCTGGA	CGACATGAAA	ACAAACTTG	AAGCATTGAA	120
CGAAAAAGCT	CAAGGACTTG	CTGTTAAACT	CTACGAACAA	GCCGCGACAG	CGCAACAAGC	180
TCAAGAAGGA	GCAGAAGCG	CACAAGCAAC	AGGGAACGA	GCGGATGACG	TCGTAGACGG	240
AGAGTTTACG	GAAAAGTAAG	ATGAGTGTAT	TGGATGAAGA	GTATCTAAAA	AATACACGAA	300
AAGTTTATAA	TGATTTTCT	AATCAAGCTG	ATAACTATAG	AACATCAAAA	GATTTTATATG	360
ATAATATCC	AATAGAATAT	TTAGCTAGAT	ATAGAGAAAT	ATATTAGCTG	AACATGATAG	420
TTGTATCAAA	AATGATGAAG	CGGTAAGGAA	TTTTGTTACC	TCAOTATTTOT	TGCTGCATT	480
TGTATCGCG	ATGGTACCAG	CTATGATATC	ATTAGAAATA	CAACATATA	AATTTGTAAT	540
ACCGTTCATA	ATTGGTATGA	TTTGGACAGT	AGTTGTATTT	CTTATGATCA	ATTGGAATTA	600
TATAGGCAAA	TACTAAGAG	AGACAAAAAT	ATATAAATAT	TTCTGTACTT	ATAGGATATT	660
TAAAATCAAA	ATAAAGTTAA	TTTACTTATT	TGCAGAGTT	GCACCCAGC	CTCTGTTTTT	720
CGATAAAAG	GGACGGAATC	TCATTTGTTT	GGGTTTGTG	TCATCAATAG	AAAGGAACAA	780
AGAGTGTTCG	TAACGTAAAC	CGGTTTCAG	AATTTCTTAC	TAAATATAAA	AGAAAGGAAT	840
TGAACCCGAC	CTAAATGGTG	GTTCGATTCA	GAACATCAAT	AGAAAGGAAT	AAGGGTGTTC	900
GTAACTGAAC	ACGGGCTATG	GACTGTGCCA	AAAAGATAGT	TTTTTCTAGG	ACGTAAAGCT	960
CCGTGTCGAA	AACCTCTAGA	TGGCTGTGTC	CGTTTGACGC	CCTTTGTATC	TTGAAATTATG	1020
AACAATFACTG	AATTTTTATGA	TCGTCTGGGG	GTATCCAAAA	ACGCTTCGGC	AGACGAAATC	1080
AAAAAGGCTT	ATCGTAAGCT	TTCCAAAAAA	TATCACCCAG	ATATCAACAA	GGAGCCTGGT	1140
GCTGAGGACA	AGTACAAGGA	AGTCAAGAA	GCTATGAGA	CTTTGAGTGA	CGACCAAAAA	1200
CGTGCTGCCT	ATGACAGTA	TGGTGCTGCA	GGCCCAATG	GTGGTTTGG	TGAGCTGGT	1260
GTTTTGCGCG	GTTCCAATGG	GGCAGGTGGC	TTGGTGGTT	TTGAGGATAT	TTTCTCAATG	1320
TTCTTTGCGCG	GAGGCGGTTT	TTGCGGCAAT	CCAAACGCTC	CTCGCCAAGG	AGATGATCTC	1380
CAGTATCGTG	TCAATTTGAC	CTTTGAAGAA	GCTATCTTCG	GAACGTAGAA	GGAGTTAAG	1440
TATCATCTGTG	AAGCTGGCTG	TCGTACATGT	AATGGATCTG	GTGCTAAGCC	AGGGACAAAT	1500
CCAGTCACTT	GTGGACGCTG	TCATGGCGCT	GGTGTCTATT	ACGTCGATAC	GCAGACTCTT	1560
CTTGGTATGA	TGCCTGCGCA	AGTAACCTGT	GATGTCTGTC	ACGGTCGAGG	AAAGAAATTC	1620
AAATATCCAT	GTACAACTCT	TCATGGAACA	GGTCATGAGA	AACAAGCTCA	TAGCGTACAT	1680
GTGAAAATCC	CTGCTGGTGT	GGAACACGGT	CAACAAATTC	GCCTCCTCTG	TCAAGGTGAA	1740
GCAAGGCTTTA	ACGGTGGACC	TTATGGTGAC	TTGTATGTAG	TAGTTTCTGT	GGAAGCTAGC	1800



1146	
GACAAAGTTTG AACGTGAAGG AACGACTATC TTCTACAATC TCAACCTCAA CTTGTGCCAA	1860
GCGGCTCTTG GTGATACAGT AGATATTCCT ACTGTTTACG GTGATGTTGA ATTGTTTATT	1920
CCAGAGGGAA CTCAGACTGG TAAGAAGTTC CGCCTACGTA GTAAGGGGGC ACCGAGCCTT	1980
CGTGGCGGTG CAGTGTGTGA CCATACGTT ACTGTTAATG TCGTAACACC GACAGGCTTG	2040
AACGACCGCC AAAAAGTAGC CTTGAAGAA TTCGCGGCTG CTGGTGACTT GAAAGTAAT	2100
CCAAAGAAAA AAGGCTTCTT TGACCATATT AAAGATGCGT TTGATGGAGA ATAATACTAT	2160
TCGAAAATCT CTTCAAACCA CGTCAGCGTT GCGTTGCGGT ATATATGTGA CTGACTTCGT	2220
CAGTCGTATC TACAACCTCA AAACAGTGTT TTGAGCAGCC CGTGGCTAGT TCTCTAGTTT	2280
GCTTTTACTT TTATAGATTT TTTAAGACTT TCTTAAGTAA TGACGACGG TAGTGACCTC	2340
CTTCGAAGTT CCATACCTAA ACTTTGAACC TAAGTTTAA AGTTTCCGGA CAGCTGAAC	2400
CAAGCTGTTT CAGGTGTTTT CATTACGGCA GAAAGTCTTC GATTGATGTG TGAATGGTG	2460
AATGATATCT TTTCAAAATT TCTTCAAAAC ACGTCAGCT CGGCTTGCTA TGGGTATGTT	2520
TACTGACTTC GTCAATTCTA TCCACAACCT CAAAACAGTG TTTGAGCTGA CTTGTCAGT	2580
TCTATCCACA ACCTTAAAC GGTGTTTTGA GCGTCTGTG CTTAGCTTTC TAGTTTGCTT	2640
TTTGATTTTT ATTGAGTATG AATTACCTAA ATATGATGTC ATAGTTGATG GGATATATAT	2700
AATAGATTGA AATAGAATAT GAACAAATTG ATAAGAGGAT TTTAAAGTAA TCTCTAACAA	2760
TGCTTTAGAA ACTATGCTGT GCTATTCTAA ATTCATTTCA CTATAACTTG TTTACGTTTT	2820
AAAAAGAGC CGTCGGGCTC TTTTACTTA TCTTCAGTTC CCTGCATTTC TTTTATCAGA	2880
GCTAGTCTAG TCTGGATATC CTTTCCAAG ACCTTAAACT TTTAAGTCAA GTCTCTTGG	2940
TATCTCTGA TAAATCTTTT TTGCTGGTTA ATGATTTGCA GGCCTGTTTT GATAAATATC	3000
ACATCGTCTT TGATAGCTTG AACCGGTCA GTGGATTCA AGACTTCATC TGTGATGGTT	3060
TGGCGATTTT TTGTAACCAG ATAACTTCCG GCTGCAGTTC CTGCAAAATG CAGTAGGTTG	3120
GATAATTCCA TAGCAACTCC TTAAGCGTTT TTGATGGTT CAGCGACTTG AGCAAGTTTG	3180
TCAAAGTCTG GTTCGTGGG GATAAAATCA ATCTTGAGGT CATCGTCAGC ACTGTAGCGA	3240
GGCAAAAGGT GAAGCTGAGT ATGAAAACT GTTTGACGAC CGACTTCTTC ACAGTTGGAA	3300
ATGATATTCA TACCAGCAGC CTTAGTGACT TTCAATGACT TTTGAGCTAC TTTTGTACT	3360
TGGCAAAAGA GTTGGCTGGC GCTCGTAGCA TCCATCTCCA AAAGATTGCG ATAGTGTCTT	3420
TTTGGCAGCA CCAAGGTGTG TCCTAGTGTT ACTTGAGAGA TATCAAGAAA GGCAAGGACC	3480
TGCTCATCTT CATATACTTT TGAAGCAGGA ATTTCCCTCG CGATGATTTT ACAAATAATG	3540
CAATCTGACA TAAAACTAC CTCTACTGTA CTGAATTTTG ATATAATATA GCTACATTAT	3600

1147

ACCAGATTG GAGAAAAAT GTTAGAAAT AAAAACCTGA CAGGTGCTA TGTTCATGTT	3660
CCTGTTTTGA AAGATCTGTC CTTTACTGTT GAAAGTGCC AGTTGGTCGG TTGTATTGGT	3720
CTCAATGGTG CTGGGAAATC AACGACGATC AATGAGATTA TCGGCTCTGTT GGCACCTTAT	3780
AGTGGCTCCA TCAATATCAA TGGCCTGACT CTCGAGGAG ATGCGACTAG CTACCGCAAG	3840
CAGATTGGT ACATTCCTGA GACGCTAGT CTGTATGAG AATTGACCCT CAGAGAGCAT	3900
ATCGAAACGG TTGCTATGGC TTACGGTATT GAGCAAAAAG TGGCTTTTGA ACGAGTAGAG	3960
CCCTTGTTAA AATGTTCCG TTTGGAAACG AATTAGACT GGTCCCTGT TCATTTTTC	4020
AAAGGGATGA AGCAGAAGGT CATGATTATC TGTGCTTTG TGTGGATCC AAGTCCTTC	4080
ATCGTGGATG AGCCTTTCCT TGGTCTTGAT CCGCTGGCTA TTCTGATTT GATTCAGCTT	4140
TTGGAAGTGG AGAAGCAAAA GGGCAAGTCT ATTCTCATGA GTACCCACGT GCTGGATTG	4200
GCGGAAGAAG TGTGTGATGC CTTTGTCAAT CTTCACAAGG GAGAGGTGCG TTCCAAAGGC	4260
AATCTCCTGC AACTACCTGA AGCCTTTGAT ATGCTGAGG CTAGTTTGA TGAATTTTAC	4320
TTGGCTCTGA CCAAGAGGGA GGATCTATGA AAGACTTGT TTTAAAGAGA AAGCAGGCT	4380
TTCTTAAGGA GTGTCTGGT TATCTGCGCT ATGTGCTCAA TGACCACCTT GTCTTGTTC	4440
TGCTTGTCCT GTTGGGCTTT CTAGCCTACC AGTACAGTCA ACTCTTACAA CATTTCCCTG	4500
AAAAATCATG GCTATCCTT TTGTTTGTAG GAATACGTC TGTTTACTT TTACTTTGGG	4560
GAGGAACCTG CACCTATATG GAGGCTCCAG ACAAGCTCTT TCCTTAGTT GGAGAAGAGG	4620
AAATTAAGCT CCATCTCAAG CGTCAAACTG GCATTTCCCT AGTCTTTTGG CTCCTTGTAC	4680
AGACCCCTTT CTGCTGTA TTTGGGCTT TATTTTAGC AATGGGTAT GGCTTGCCAG	4740
TTTCTCTGCT CTATGTGCTT TTATTGGGG TAGGAAAATA TTTCACCTT TGTCAAAAGG	4800
CCAGCAAAAT TTTCACTGAA ACTGGACTGG ACTGGGACTA TGTTATTTCT CAAGAAAGCA	4860
AGGTAAGCA AGTCTTGCTT CGTTCTTTG CCTCTTTAC GCAGGTCAAG GGAATTTCAA	4920
ACAGCGTTAA CGTCTGTC TATCTGACT TTATTTTAA GGCCTTCAG AAGGTGCTG	4980
GGAAAGATTG GCAAAATCTC TATCTGCTT CTTATCTGG AATGGCGAC CTCTTTGCTC	5040
TCAGTCTTGG TCTTCTCTTG CTTTCTTGC TGGCGCAGT TTTTATCGAG CAGCTTTGA	5100
TTGCGACAGC AGTGGTAGTT CTCTTTAAT ACCTCTTCT CTTCAGTTG CTGGCCCTCT	5160
ATCATGCTTT TGACTACCAG TATTTGACCC AACCTTTTC GCTGGACAAG GGGCAAAAGG	5220
AAAAAGCTT ACAGGAGTA GTTCGAGGAT TGACCAGTT TGTTTTACTT GTGGAATTAG	5280
TTGTGGGTT GATTACCTTC CAAGAAAAC TAGCCCTTCT AGCCTTACTA GGAGCTGCTT	5340

1148

TGGTTTACT	AGTCTGTAT	TTGCCTTATC	AGGTAAACG	TCAGATCAG	GACTAACATT	5400
GCTGATACGA	CACTAAAAA	GAAGTTGAGT	TCAGTCTGTC	TCAACTCTCT	TTTTGTTACT	5460
ACAGGATAAT	GGTTGGTCCG	TAGAGACCTA	TACTCTTCGA	AAATCTCTTC	AAACCACGTC	5520
AGCCTCCTCT	TACCGTACTC	AAGTACAGCT	TGCGGCTAGC	TTCTAGTTT	GCTCTTTGAT	5580
TTTCATTGAG	TATTAAGTTG	GTCTTGACTT	GTCAAAAGTG	GAAGCGGTCA	TAGGCCCGCC	5640
AAGCGCGCG	AGTTGGAGCA	TCTGGATCAA	GAGCGCTGAG	TCCCATGAGA	AGACTGGAAG	5700
TCTGGTAAJA	TTTTTCTAGT	TCAATCAAGA	ATCGATTATC	CAGTGTTC	GCCTTGGCTA	5760
GAJAAACCAAG	AATAGAGTTT	AATTCCTCCT	GAAGCGGAC	GTCGTACGCG	CTTGCTGTTT	5820
TGCATCTGTT	GTAGGCTTTG	TTTAAAGTCAG	TAATCAAAGT	ATGAGCTCTT	TTGATGGGGT	5880
CTGTATCTGT	CATGGGAATG	CCTCCTTTAA	TCTGGGTGCC	AGTCTTACTT	CTGGCAACTG	5940
TGTTTTGATA	CTGTTAGTTT	ATCACTTTTA	ATCTTTTTT	TTTATTCAAA	TCTTTAATTG	6000
TCATTGAAAT	GTCTTGAATT	GCGCTGAGTG	AAITTTATGA	TAAATAGTT	GTAAGCTCAT	6060
CATGATGTTG	TAGAAAAATA	TCCTTTTAGG	AGTTTTCAAA	GACTGTTTAG	GATTGGGTGT	6120
GCTTGGGCTA	GACCTTTTCT	GTTATTCTTT	TCTTAGGAGG	AGAATCCAAT	GAATATATG	6180
ATTATTCAGA	CGCAGAAAC	AGTCTATAAA	GTAACATCG	ACGATATCTA	CTATATCCAA	6240
ACACATCCAA	CTAAAGCCCA	TACCGTACAG	ATTGTTACAG	AAGAAGCTAG	TTTTAATATG	6300
CTTCAAAATT	TAAATAATCT	TGAGAACCAA	TGTGGGGAAA	CCTTGATGAG	ATGTCATCGA	6360
AAATGTTTGG	TTAATCTTGA	TAAATTAJAA	TCGATTGATT	TTCAAGAAAG	AATCCTTTTT	6420
CTCGGAGAAAG	AAGGTCAATA	CGCTGTCAAG	TATGCCAGAC	GTCGCTATAG	AGAAATCTGT	6480
CAJAAATGGT	TGAAAGAGGG	AGAGTAAGAA	GATGAGAAATA	TTTGTTTTAG	AGGATGATTT	6540
TTCCCAACAG	ACTAGAATTG	AAACGACGAT	TGAGAAACTT	TTGAAAGCAC	ATCATATCAT	6600
TCCTAGCTCT	TTTGAGGTAT	TTGGCAAGCC	GGACCAACTG	CTGGCTGAAG	TGCATGAGAA	6660
GGGGGCCCAT	CAGCTATTCT	TTTTGGATAT	TGAGATTTCGA	AATGAAGAGA	TGAAGGGACT	6720
GGAAATGGCT	AGAAAGATTG	GGATCGGGA	TCCTTATGCC	CTGATTGTCT	TTGTGACGAC	6780
TCAGCTGGAG	TTTATGCCCC	GTCTTTTTTCG	CTACCAAGTG	TCTGCTTTGG	ACTACATTGA	6840
TAAAGGCTTGG	TCAGCAGAGG	AGTTTGAATC	TCGATCGAG	ACAGCCCTCC	TCTATGCCAA	6900
TAGTCAAGAT	AGTAAAGTC	TGGCGGAAGA	TTGCTTTTAC	TTTAAATCAA	AATTTGCCCA	6960
ATTTCAATAT	CCTTTTAAAG	AGGTTTACTA	TCTCGAAACG	TCGCCAGAG	CCCATCTGTT	7020
TATCTCTTAT	ACCAAGACAG	ACAGGCTGGA	ATTTACAGCG	AGTTTAGAGG	AGTTTTTCAA	7080
GCAGGAGGCC	CGTCTCTTGC	AGTGGCACCG	CTCTTTTCTC	ATCAATCTCTG	CAATATGGTT	7140

1149

GCATTGGAT AAGAAAGAAA AACTGCTTTT CTTT

7174

(2) INFORMATION FOR SEQ ID NO: 190:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 3207 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

CCACCAGGGA AATCATTGA AGTGGTAGT CACCAAGAGT TAATGCAGGC GCAAAGTTTC	60
TACCATCATC TATTCAATAA ATAAGGAGAA TGTCATGAAT CCTATCTTT TTAGAAGCGT	120
CGAGTTTTAT CAGAGACGTT ACCATAACTA TGCACAGTG TTAATTATAC CTCTTTCATT	180
ACTATTTACT TTCACTCTGA TTTTCTCCCT TGTTCACACA AAGAAATTA CTGTTACTTC	240
CCAAGGAGAA ATCGCCCTTA CAGTGTCACT GCCTCCATTC AGTCAACCAG TGATAATCCT	300
ATCCTAGCTA ATCATTTAGT GGCAATCAA GTAGTTGAAA AAGGGGACTT ACTCATCAAA	360
TACTCTGAAA CAATGGAAAG AAGTCAGAAA ACTGCCTTAG CAACTCAATT ACAAGACTT	420
GAGAAACAAA AAGAAGGACT TGGAAATTTG AAACAAAGCT TAGAAAAAGC GACTGATCTT	480
TTTTCTGGCG AGGATGAATT TGGCTACCAT AATACCTTTA TGAATTTTAC TAAACAATCC	540
CATGATATTG AACTGGGTAT CACAAAGACT AACACGAAG TTTCAAAATCA AGCTAATCTT	600
TCCAATAGCA GTTCATCAGC TATTGAACAA GAAATTACAA AAGTTCAACA ACAAAATTGA	660
GAATATCAAG AGTTGAGAGA TGCTATCATA AATAACAGAG CACGCTTACC AACTGGCAAT	720
CCGACCAAGT CAATTTTGAA TCGTTATCTT GTAGCCTCAC AAGGACAAC ACAGGGAAT	780
GCAGAGGAGC CATTTTATC TCAAAATTAAT CAAAGTATTG CAGGCTTTGA ATCATCTATC	840
GCAAGCCTCA AATTTCAGCA AGCTGGTATC GGAAGTGTAG CAACTTATGA TAACAGTTTA	900
GCAACCAAAA TTGAAGTACT CGGACTCAG TTTTACAGA CAGCCTCACA GCAACAATA	960
ACTGTGGAGA ATCAATTAACT AGAATTAATA GTACAACATG ATCAAGCCAC ACAGCGTTTG	1020
GAAACCAATA CCTTAACCTC CCCAAGTAAA GGTATCGTTC ATCTGAACAG CGAATTTGAA	1080
GGTAAATAATA GAATTCCAAC TGGTACAGAA ATTGCTCAAA TATTCCCTGT CATCACAGAT	1140
ACAAGAGAAG TACTAATCAC TTACTAAGTA TCTTCTGACT ATCTACCTCT ACTAGATAAA	1200
GGACAAACTG TAAGATTAAA ACTGGAGAAG ATTGGAAATC ACGGCACCA CATTATCGGC	1260
CAACTTCAGA CAATTGATCA AACTCCTACC AGAACAGAG AAGGAATCT CTTTAAATTA	1320

1150		
ACCGCTCTTC CAAAACATC TAACGAGGAT	AGTAAACTCA TCCAATATGG CTTCACAAGGT	1380
CGCGTCACTA GTGTAACTAC AAGAAAACA	TATTTTCATTT ATTTCAAAGA TAAATTTTAA	1440
ACACATTCTG ATTAATTTTC AGATAACACT	CTATAACTAT TTATTATCTT ATCAAAAAGG	1500
AGAATCATAA CATGTATAAG AAACAAAACC	TAACTTCATT TCAAGAATA ACAACTACCG	1560
AATCAATCA AATTACAGGT GGAGGATGT	GGGAAGATT ATATATAAC ATTAATAGAT	1620
ATGCTCATTA CATCACATAA GAACTTCATC	ATCCAATACA ACTATAAAAA AATAAGACCG	1680
AGAAACAAGT ACTCTCGGTC TTATTTTTC	TCATTCTGTA TGTATCACAG TAAGTACCTG	1740
ACGAAGACT TGATTTTGAC AGGTGGTATT	TAGACTGGTA TTAGGATGGC TTTCACAAT	1800
CTTCAATGAC GTATAGAGAC CAACTCCTCT	CTCCTCCCTT TTAGAAGTGG CTCCAAGGA	1860
GAAGATTTC AAGATATCGA TGCCTCTCTC	TTTGTATGAG TTTTCGATGA TAAAGGTCTC	1920
CTGTGCTCCA TTTTAAAA AGGCGATTGA	AACATGAGGT TGACTAGCTT CCACACTGGC	1980
TTCAATAGCA TTGTCAAAA GGATAGACAC	AATGGTTAGA AAATCAAGTA GACTCATCCC	2040
CTCGACTGGA ATCTCCTCAG GAACTTCGAC	ATTAAAGACA ATGTCTTAT CTCTCGCTTT	2100
TAAAAATTC CTGCTAGAA GACTTTTGAG	GGCTTTATCA CGAATATTTA CCAATCTGCC	2160
CAGGTCAAT TTAATTGTCT GCAATTTCTG	ACTGGAAATCC TTTAAGACGG AGCCATAGAC	2220
CTCTTTTATC TGCTCCATAT CCTCCTCTTC	AATGCCCAGA CGTAAGCTAG TCAAGAGGTT	2280
GGTATAATCA TGACGAAAGC TCCGTACTTC	CTTGTAAAGC TCCTCTATAT GCCGACTATA	2340
GCGTTCCATA TCTCTATAGC GCAGGGCCTG	CTCTGTGTCC AATCTCTCAT AGAGTTTTTC	2400
CTTCAAAATAG GTATCCAAAT TCTTGATAAC	CCCCATAAAA AAGAGTAGGT AAAAGACTAG	2460
GATGAGATGG CGAACAGTCT TTGATTGAAT	ACTTTGTTCA TATTCAAAAA AAGACAGACT	2520
TTCCATGACT AGATAGTAGC CACCCATTAT	CCAGTTAATC TGAGTCAGGG ACTTTTGAAA	2580
GGCTTTATCG AGAATCTCCT TTCTCAAGCT	AGTAAAAATG TAGTCCAACC ATTTCAAAAA	2640
AGCTAGAGAA ATGAAGAAAT TGAAAAATTAT	TATACATAAC CCAGTAAATG AGTAGCCATC	2700
ATATACTTGC CCTTGTCCCA AAAATGGAAG	CACAAAAATG GAGACTCCTC TATAAAAGAG	2760
ATTCACAAT ATCATGTGAA AGAGACCATA	AAAGAAAAAG AGTTTTTTAG GAAGCCCTCT	2820
CAATAATAAG AAGATAAGC CTATGCCGTA	CAAGGGTTC CATAAATAAG ATAGTAAAC	2880
ATTTCTTACT ATATAGATAA TCATCACAAA	AACAAGGCC AACAGTATCT TCAAAAGAAA	2940
GGCTTAAAA ATCTCTCTGA AAGTAAGATC	AATTCATACC ACCTTAAAGA AGATGACAAT	3000
TTCTAGTCCA TTAGTAACAA GTGTATACAA	CAATATCCAA GCATGTGTCA TAAATCTCC	3060
TAGCTCAGTG TAATTTATTTG ATGGCCTCAG	ACACTTCCCT GACCTTATAA CGGGCGATTA	3120

1151

GACAACTTCC ACCATTGGGA GAGAAGAGCA GTTTTCTCTT CTTATCCAAA TGCACCACAT 3180  
TTGCAGGATT GATGAGAAAA GAGCGGT 3207

(2) INFORMATION FOR SEQ ID NO: 191:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 10357 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

CTGAATCAAG TGTAAGTGCAC CAGTTCGTGC ATCAGGCATA ACAACATCTA CAGATATAAT 60  
ATTGTTTTCT GAGTCCGCCT CATAAGTTAA AATCATAAAT TTTTCGATAT TCGAATTTTT 120  
AGTAGCTTGT TCAATTTCTT GAATCATTTC ATCAGAAACT AACTCCATCT GAATTTGGAAA 180  
GGAATGACTA TTTTCATCAT TTTGTAGGA AGAATGTTGA TTAAGATAAA GTGTATTCAT 240  
CTGAGCATAT TCAATAAGT AGCCACTCTT ATTTTCTGT ACCAAAGGAA ATTGTTTTGT 300  
AAGTCGCTTC TTACCCCTTA TAATTAACAA TACTTTCCCA TATTTTCTG TATTGTGTTT 360  
AAATTCATAA TAATCCCAAG TCTGTCTGTC TAATGTAAT TTATACTCA ACAAACTGTC 420  
TGATGCAAAAT GCAGTATCAA TATGATTAGG TCGCGTCCAT GCATAACCAT TCGACACTAT 480  
CATTGCTCTT CTTTTTCTA GAGTTTCATC TACATAATCT TTTTGCCCTT TCATCAAAGT 540  
ATCTACAATT TTTTGTGCTT CAAGCGAATC AAAGAGATCC TGATTCACAA TAATTCCTCC 600  
TCCTCCAAAT ACTTTTTAAT GAATTATACC ATTTTCTTAA AGAAATTACT ACAATAATTA 660  
TCTTTTTCTT AAAGTCTGTG GTCAGAGTAA TTTAGAAAAT TATATCTTCT ATAGTAAAAAT 720  
CAATTAAAAA CTGAACAAAT TTATTTGGGAA ATTCAAATCG CTTCCTGAAA ATATTTTATG 780  
AACCCTAGTG TAATATTCCA GATTCAATTC ACTATAAAAC TGACCTTTCT CCGCAAAAG 840  
AAAAAGGAAA GACTTCTCTT CGTGCCCTTC CTCCTACTTG CTACTGTGTT GATTATTTTT 900  
GGTAAGCTAC TGCTTGCTG ATAAAACTC GAATCGGCTC TCCTTGGTGG AGAGCTTTTA 960  
CTATTTTCGA ACCGACGATA ACACCATCTG ACACCGCATT GAAGCGTTCC AGATCGGCTT 1020  
GACTAGATAC ACCAAAACCT GTCAAGACTG GGATGTCGGC CACTTGATGA AGTTGCGCCA 1080  
AGTGCTTGTC CAAATTCGCA CGGTAATTGC CTGATTTCCC TGTCACTCCA TTGATGGCAA 1140  
CGGCATAGAT GAATCCCTCC GCCCCTTCAA TCAACTCTTT CTGGCGCTCA ATTCTGTGTT 1200  
TCAAGCTTAC TAAAGGAATC AAGCGATAT CTGTATTTGC CAAAAATGGT TCTACAAAGT 1260

1152

TGGCATGTTT	ATGAGGCAGG	TCTGGGATAA	TCAAGCCCTT	CACAGCTGTA	TCAGCCAGAT	1320
CTTTGACAAA	GTTCTCCACA	CGTACTGAA	AGAGGGGGTT	GAAGTAGGTC	ATGATGACCA	1380
GTGGAACTCT	TGTTTCAATG	GTTTTC AAGG	TTTCAACTAA	AGCCTGGGTA	GAGTCCCGT	1440
GGGCTAAACT	GCACAAGCCA	GCTTCTTCGA	TAAACAGTCC	ATCTGCAACA	GGGTCTGAAA	1500
AGGGAATACC	CACITCAATT	GCAGAGACAC	CCAAATCTTC	TAAAAGTGA	ATTGTTTCAG	1560
CAAGACCGTC	CBAACCTTTC	TCGTGGTCAC	CAGCCATGAT	ATAGGGAAAC	AAAATTCCTT	1620
TTCCAGCTGC	TTTAATAGCA	TTTAATTTTT	CTGTTAGTGT	CTTAGGCATG	AGCTTCTCCC	1680
TTCTTTGCTG	CATCTGCTTC	CAAGCGGTCC	TTGACTTGAA	CCACATCCTT	GTCCCCACGA	1740
CCTGATAGGC	AGACAATCAT	AGACTTTTCT	GGTCCAAGTT	CTTTGGCCAA	TTTCACCCGA	1800
AAGCGATAG	CATGGCTAGA	TTCCAAGGCT	GGGATAATCC	CTTCCACACG	AGACAAGAGT	1860
TGGAATCCTT	CCAAGGCTTC	TTGCTGTGTC	ACAGGGACAT	AGCTGGCAGC	TTTAATATCG	1920
TGGTAGTGAG	AATGCTCTGG	ACCGATACCA	GGATAGTCCA	AACCTGCTGA	GATAGAGAAG	1980
GCTTCAAGAA	TTTGACCATG	GGCATCTTGG	AGCACATCCA	TGAGGGAAAC	GTGAAGGACA	2040
CCTGGACGAC	CCTTGCTCAA	GOTAGCTGCG	TGGTGTCTGT	TATCCACACC	AAGCCCTGCT	2100
GCTTCAGTTC	CATACATAGC	TACTGACTCA	TCTTCTACAA	AGGGATGGAA	GAGCCCGATA	2160
GCAATTCGAC	CACCACCAAC	ACAGGCTACT	AGGGCATCTG	GCAGATCTCG	ACCTGTCAAG	2220
TCACGGTACT	GTTGTTTACG	CTCTCGACCG	ATGACACTTT	GGAACTCACG	AACGATTTCT	2280
GGAAATGGAT	GAGGCCCCAA	GGCAGAACCA	AGGATATAGT	GGGTATCTGT	GATATTAGCC	2340
ACCCATGAAC	GAAGGGCTGC	ATTGACCGCA	TCCTTGAGCA	CGCGCCAAAC	ATCTGTTACA	2400
GCCTCGACCT	TGGCTCCCAA	AAGCTCCATG	CGGAAGACAT	TGAGGGCTTG	GGGTTTGACA	2460
TCTTCTCACC	CCATGTAGAT	GGTACATTC	ATGTTAAAGA	GGGCTGCAGC	AGTTGCAGTT	2520
GCCACACCGT	GCTGACCAGC	ACCCGTTTCT	CGCATTAATT	TCTTTTTCAC	CATGCCGTTG	2580
GCAAGCCAAA	CTTGCTCTAA	GGCATTGTTA	ATCTTGTGGG	CTCCTGTATG	GTTAAGGTCT	2640
TCCCGTTTGA	GATAAATCTT	GGCTCCGCCA	ATATGCTGGG	TCAAATTTTT	TGCGTAATAA	2700
AGAGGAGTTT	CACGTCTCTAC	GTACTGGGCC	AAAAGCTGCT	TTAATTCCTC	TTGGAACCTT	2760
GGGTCTGCCCT	GACTTTCAGC	GTAGGCCTTC	TCCAATCCA	AAACTGCTGT	CATCAATGTT	2820
TCGGGACAAA	AACGCTCCGC	GAATTTTCCG	TAAATCCAT	CTTTATTTGG	TTCTTGATAT	2880
GCCATGCTTT	ACCTCTCTTA	TAAATCTCT	AATCTTTTCA	TGATCTTTTT	GTCCATCTGT	2940
CTCCACTCCG	CTCGATACAT	CTACTGCTTA	GGGAGTAAAG	TGTTGAATTG	CTTTACTAC	3000
ATTATCTTCA	TTAAGGCCAC	CTCGATAA	GAAGGGCTGT	GCTATCCAG	TCGTATCCAG	3060

TTGACCCCAA	TCAAAGGGCT	GGCCACTTCC	TGCCACAGGG	GCATCAAAGA	GTAGATAATC	3120
TGCGCTGAGAA	TTGGGGACAT	GCCCATTTCC	ATCTACCTGC	ACAGCCTGAA	TACTGGCACA	3180
AGGCAAAATC	TCAAATAAAT	CATCTGCCAC	CTGACCGTGA	ACTTGAACCA	AGTCCAAGCC	3240
AACCTTGTC	ATCGCTTCCA	GCACTTCTAC	CGSACTTGT	GAAACAATA	CTCCAACCTT	3300
TTTCACATCT	GCAGGAATAA	GCTTTGCCAA	CTCAGCTGCC	TCTTCTAAG	TCACCTGTCT	3360
TTTACTAGGT	GCAAAGACAA	AACGATATA	GTGGGCTCCT	GCTGAAACGG	CTGTTCACAC	3420
CGCTTCTTTG	GTGATAGTC	CACAAATTTT	AACCTTTGTC	AATCTGCAAC	TCCTTGATTC	3480
TCGGGGCCAC	ATTTTCTGCC	TGCATAAGAG	CTGTCCCTAC	CAAAATTCGG	TTAAAGTATG	3540
GGGCTAGTCG	TTCCGCATCC	TGCCCTGTGA	AAATGSCAGA	TTCAGAAATG	TAATAGCGAC	3600
CTTCCTCAAA	GTAAAGGGCT	AAATCTACAC	TGGTCTGCAA	GTGACCTCA	AAGGTAGTCA	3660
AGTTGCGGTT	GTTGACCCCG	ATAATCTCAG	CACCAAGTCT	GTGGGCTACC	TCTAGTTTCA	3720
CTAGATTGTG	AGTCTCCACT	AAGACTTCCA	GACCAAGCTC	TGTCGCGTAG	TCATACAGTT	3780
CCTTGAGGCG	TTCTTGGGAC	AAGGCTGCCA	CAATGAGCAA	GATAACTGTC	GCACCTGCAT	3840
TGCGAGCGCG	GATGATTTGC	TTTTTCATCGA	TGATAAAGTC	TTTGTGAGC	GTCGGAATCT	3900
CTACCTGACT	GGAAATTTCC	CGTAGATAAT	CCAAATGCCC	TTTAAAGAAA	ACCTCATCTG	3960
TCAACACCGA	AATCATCACT	GCTCCGTTT	CTTCATAAGT	CTGGGCTGT	TGCACAATAT	4020
CCACATCGAG	ATTGATATCT	CCCAAACTAG	GGCTAGCTTT	CTTGACCTCA	GCGATTACCT	4080
GCAAGCGGTC	CTGATGATTC	TTCAAAAATT	CTGCCAAGCG	ATAGGCTTGG	CGCAGAGGCT	4140
GGATTGTCTC	CAGCTTCATC	TGCTCCACCT	CACGCGCTT	CTGCTCTAAG	ATTCTGTGCTA	4200
AAAATTCTCTG	ACTCATTTTT	GGTACTCTGT	TAACAGCTGT	AGTTTTTCAA	GGGCTTGGC	4260
TCTAGCAATC	ACTTGACGGG	CCAAGSCAAC	CCCTTCTCTG	ATGCTATCAA	TCTTACCATT	4320
AGCATAGAAA	CCAAGACCAG	CATTCAAGAC	TGTCGTTTCC	AAGAAATGGAC	TTGCTTCGTT	4380
TTTCAGAACG	CTAAGCAAAA	TTTCTGCATT	TTCTTGAGCA	TTCCCAACAC	GAATATCTTC	4440
CATAGCATAG	CCTTCCATT	CCAAATCCTC	TGGAGTAAAG	CTTGACAAGC	TGATTTCCGC	4500
ATTTTTCAMGA	AGTGCAATCT	TGGTTGTTC	GTTCAGCCA	GCTTCATCCA	ACCTTCTGG	4560
TCACGACACC	ACGATGGCAC	GTTTCCGACC	CATATTTTTC	AAAACCTGAG	CTGTACTTTC	4620
TAGGAGTTCT	GGACGACTAA	TTCCAAGAG	CTGTGTTTCT	AAAGCCATTG	GATGAATCAG	4680
TGGACCGACT	AGTTTCATAA	TCGTTGGAAT	TCCCAATTC	AAAGAGCTGC	GCATGATGTA	4740
TTTCATAGCT	GGGTGCATAT	TTTTAGCGAA	GAGAAAGAGC	ATTCAGTTT	TATCAAAGAC	4800



1154

CTTACCTAGT TCAGCTGGTT TGAGGTCAAG AATTGATTTCC	AAGGCTTCGA GGACATCTGC	4860
GGAAACAGAT TTAGAAGATA TCGAGCGGTT ACCGTGTTTG	GCCATGTGAA TACCGCCACC	4920
AGCCAAAGACA AAGGCTGCAG TTGTGGAAT ATTAAACTG	AAAGACTTGT CCCCACTCT	4980
ACCACAGTTG TCCATGGCAT CATGAATCTC AGTTGGAATA	TGCTGGGCAT GTCTCTCTAT	5040
GACTTGGGCA ATGGCTGTGC GTTCTTCAGG TGTTCCTCCC	TTCAATCTAA GAGCTAAGAG	5100
GAGAGAAGCA ATCTGCGGTT CAGTTACACG CCCAGTTACG	ATACGCTCAA TGACATCGT	5160
CATTTCACA CCTGATAAAT TTTCAAATTT TGCTAGTTT	TCAATAATCT CTTTATCTCT	5220
AGTTTTCCTCA CTTTACAACC TCCTCGATAA AATTCCGAAT	AGAAGACAAG CCGTCTGGCG	5280
TTCCAATGCT CTCTGGATGG TACTGGAGC CATAAATCGG	TAGGTTTTAA TGTTGAATCC	5340
CCATGATGGC TTGGTCATCA GTCGAACGAG CTGTCACTTC	AAAGTCTTCT GGCATTCTCT	5400
CAATCAAAAT ACTGTGATAA CGCATGACCG CACGGCCATC	CTCAATACT TGATACAAA	5460
CAGATGGGCG TCCAAGTTG ATATTGCTCT GTTCCCATG	CATGACTTTT GGAGCCAAAC	5520
CTAGCTTACC ACCAAAGACT TCTGCAATGG CTTGGTGGCG	CAAAACAATC CCAAGAAATCG	5580
GCCTTCCTGCC TGCAAAATCA CGAATCATGT CTTCCATCTT	TCCAGCATCA ACTGGCCAAC	5640
CAGGACCAGG AGAAAAGACC AGACCATCTG CTTTTTCAGC	TTCTTTCATAC AGCTTGGAA	5700
CATCATTTCT CAGAACCTGA ACTTCTGCAA AATTCCCAAT	GTATTGGGCC AAGTTATAGG	5760
TAAAGAAATC ATAGTTCTCA ATCAATAAAA TCATGCTCTT	AGTTCCTCAA TTCTAGTCAT	5820
AGATTTTGCT TTGTAAATGG TTTCTTGGTA TTCTGTTTGG	GCGATAGAGT CGTAGACAA	5880
CCCTGCCCCA GCCTGCACAT AGGCTCTTTG ATTTTGTAGA	ATCATGGTTC GGATGGCGAT	5940
GGCCAAATCC ATATCACCCG TCGCAGACAA GTAGCCGATT	GCCCCAGGTT ATACTCCCG	6000
TTTTTCCGTT TCCAGTTTAT AGATACGTCT CATCGCTCGA	ATCTTTGGTG CTCCAGAAAC	6060
GGTCCAGCA GGAAGCGTTG CTTTCAAGGC ATCCATGGCA	GTGAGTTCTG GAGCAAAAG	6120
CCCCTGACT ACGCTGGTCA AATGCATGAC GTAGCGGAAG	AGCTCCACTT CCATATACIT	6180
AGTGACTTGG ACACCTGGCT TTTTCAGAGAT CGGCCAATA	TCGTTACGCC CCAAGTCTAC	6240
CAACATTCGA TGTTCCTGCT TTTCTTCTCT ATCAGAGAGG	AGGTCACTGG CCAAGGCTT	6300
GTCTTCTTCA TCCGTAGCCC CTCCTTGGTCG CGTCCCTGCA	ATCGSATGG TTCTACGAT	6360
GCCATTTTGG ACAGAAACCA AACTTTCTGG ACTAGCTCG	ATGATTTGAT AATCCCAAA	6420
ATCATAGAAA TAAAGGTAAT TAGAAGGATT AGTCAAGCG	AGATTTCCTGT AGAAGTCAA	6480
TGGATTTCGA GTAACTTCTG CTGAAAAGC CTGGCTGAGT	ACACATTGGA ACATATCTCC	6540
CTTACGAATC AAGTCAAGAG CTGTTCTAC CATTCCTCA	AACCTTATGT GAGCGATATG	6600

1155

CGGTTTGAAG TCTAACGAG ATAGATCCAA ATCTTCAAAT TCATTGGAG CAGGAATGCG	6660
TAAATCCCA AGCACTTGGT TCAAGGATTT TTCCAAGGCC TCTTGACTGC GCTCACTATA	6720
AAGTGCAATC TCTATGACAT GTATCTTCTC CTCTCTGNGG TCAAAGAACA TATAGCTCTC	6780
ATAGACAAAG AAATGCATGT CTGGCGTCCC AATTGTATCC TCAGGGATTT GACCAATTTT	6840
TTCTATAAGC GAAATCATAT COTAAACCAC AAAACCAATG GCTCCACCAC CAAAAGGTAG	6900
CTCTGAGTGG TGCTGACTCT TATGAATCAC TTCTATAAAG AAATCCAAGG GATCCCGATC	6960
AATCACTTGA CCATTTTGAT AGAGAACCCC ATTTTCAAA CTTAATCTCAA AAACGTGATT	7020
ATAGGCTAGG ATAGAAAAAC GAGCTGTTTC CTCTGCTCTC GGAATACTCT CTAAATAAAC	7080
CTTATGTGTC CCCTTTAAGC GATATAAGC CAAGATTGOT GATAAGACAT CTCCATGAAT	7140
GATTGCTTCC ATTGTAAATTT CCCTTTCACT TCTACTTCTA GTCCGTGGTG ACTGATGAA	7200
AAATCCCAC GCAAAATAAC TTGCGTGAGG ACGAATTTCC CGGTGCCACC TCAATTAATAG	7260
GATTTCTCCT ATCTCTCAT TCTGCTCAG ATATCTCCTG TAACAGGCTG TCGGATAAAG	7320
GGCACTCCCT TGAGAATGAT GTTTTCTTCT CTCTGTTTCA ATGAACCCAA CTTTACAGCT	7380
TTCTCTGCTT GTTTTCAGCA ACCACAAGCT CTCTGTGAGG GAAAGAAGTG TAATTTTTCC	7440
ATCTATTAAT TTTTAGCTTC TAGTAGTCTG CAATGCGAGC TAGGTCTCTG CCTCCACGAC	7500
CAGAGACATT GATGAAGAGA TGTTCATCTC GGTACACCTT TATACTCTTC GAAATCTCT	7560
TCAAACCGCG TCAACGTGCG CTGCGGTAG GTATGTTAG TGAATCTGTC AGTTCTATCT	7620
GCAACCTCAA AACAGTGTTT TGAGCTGACT TCGTCAGTTC TATCCACAAC CTCAAACAGC	7680
TGTTTTGAGC TGACTTGTTC AGTTCTATCC ACAACCTCAA AACAGTGTTT TGAGCTGACT	7740
TCGTGAGTTC TATCCACAAC CTCAAACAGC TGTTTTGAAG AGCCTGCGGC TAGTTTCTTA	7800
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AAGGCCCTAA TAAAGATAAA ACCAAACGAC GGTATGAAAA AAGCCACAC ACAGATATATA	7980
CTTCCGTGTG AGGGCGTGG TAACGCGGTG CCACCTCAAT TATAAAGGA CTATCCCTTT	8040
ACATCTCTGC CTGTGTTAAC AACAGCTGC ACTGTAAAGT GTGCGCACCG AATTTTCATT	8100
GTTTCAAAAT CATTTTCAAA ATCAGGCCAC TTTCACACTT TCCAACACC TATTACAAAT	8160
CACCACAGGC TCCCTGAAGA TCAAAAATAG TTACTTTTCT GATTTGTGA ACTTATTTTA	8220
ATACTTTGTT TTTTCTTTTG CAAGACTTTT TTACGATTTT TTTGMAAATA TCATTGGAAT	8280
ATGACCATGT CTTCCTTAGA TCGAACATGA ACATGTCCCA CTCTTAGAA ATTGGATCCA	8340

	1156	
ACTCAATAGA AACTGAATGG AGGCTAACA GAACTTATTT TAGAACACTC CATCTTTTCC	8400	
ACTAGGATTT TCAAGAATTA AACAACTACT GAAACTCTGT CTCTTAACAA ATTTAGGAGA	8460	
AACTTCAACA GATGTGACAC TTTCCCTTTT AATAATTGCT AAACACCTT CTATCATTTT	8520	
TTTAGCCAAAT TTAAACATAAT TGGGAGCAAT TGTAGACAAA GCTGGAGTAT AATACTGAGA	8580	
AATAGGAATA TTATCAAACT CAATGATAGA AATATCATCT GGAATAAGAA TTCTTTCTCT	8640	
ATAGCACGCA CGAATCAAGC CCTGAACCTT TTCAATCTCT GAAACAAAAA TAATGTCCGG	8700	
ATAATTTTGG GTAGTCAAGT GCTGCATGTC ATAAGAATAA ACTGAATCAA TTGTAGATAA	8760	
GCCATAAATG ACTTTTAAAT CCATAAAGTA ATTTTTATCA TTCAGAAAAG AACGACACCC	8820	
TCCTTCACGA TCCTTATTA CAATGGGATTC TCCTCCATA AGCAACCACA TATTTTTAAA	8880	
TTTTCTTCA GTTACAGCTT TCATCATATC ATAAGTAGCT TGAAAAATAT TATTAGATAC	8940	
ATAGACTACT CCAGACGTTT GAGATTACCC GAAACAAAGA AAAGGCATAT GGTCTCTCTT	9000	
TAAATACTGA ATTTCTGATAT CATCTACACT TTCATAAAAA ACAATAACAC CATCTACTAG	9060	
GCTACTGTGT CTTGATATAA TTGAATTACT AATTGTATCC TCCTCTCCAA AGTACTTCAA	9120	
TATAGCATTA ACACCAAAAT CTTTACACGT CGTAAACACT TTATCTAACA GCGATGAAA	9180	
CCAAATTAAG GGAAGAGAGT CGATTTTTTT TACAGAAATC AATATATTTA TAGCTTCTTT	9240	
TTTAGTTAAA TTTTTTGCAAT ACGCATTTGG AATATACGAC AATTCCTCTA TAACTTTTTG	9300	
AATCGCTTGA TAAGTTTCTT CTTTAACATF TACTCCACCA TTAATAACTC GTGAJAAGTGT	9360	
TTTTGGAGAA AAACCTGATA AACGTGCAAT ATCATAAATA GTTCACTTTT TCCCATTAT	9420	
ATTTTTTCATF TCAGTCCCTCC ATTACGAACA TTCTAATATT ACTATACAAT ATTTAATTTT	9480	
TTTTTAACAAG AGAATTAGT AAATTTATTT AGATCCACAA ATTCACAAAA TTAATTTTAC	9540	
AAATATCTCT CCCCTTCAAA AAAGTTTAAA TTGCATTTCA CACCTTTTAT TTTAAGAATG	9600	
TTTCCAACTT CACGACAAAT AAATTCATAT GAGAAAAAAC TGCCATAAAA TTGTAGATTA	9660	
ACTTTTTCAG TAAATGTGT AGGATTATATA AAAACATATA ATAGCCTGTC AATGTAAACAT	9720	
TTTAACATAG AGTTAATTTT TTCTTTAAAG ATACATTTG TTATCAACTC ATCAGGAGGT	9780	
AAATGAAGGG CAACACCAT TTCACAAATA TCATAAAAG AAATAAATTT GTATACTTGT	9840	
ATCAAAACAT TATTATCAAA ATATTTCTATT TTACCTAAAT CAAATTTGAT TTTATAATCT	9900	
TTCAATAAAA CCTCTGAGCA AAAATCTACT CAAAAATAG ATGATTAAAA CATCTAAAAA	9960	
GCAAAAGGAC AAAACATCT GTCCCTTTGT TTAATAAAT TCAGCTAAT TCTTCGACAT	10020	
AAATACACC TACAAATTA GCAATTTCTT CCATCAGTCG AAGATGTTC AATCTACCTG	10080	
ATAATCCAG AGTAATAAAT GACGCTATTT TTTGTCCGG AACATCAAG TATTCAATTC	10140	

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TGTCAGAATT AACATCTCCA AACGCTGTC TTGAATCGGT CATTCTGATA CCAATTTCTG	10200
CACAATAAAC CAATACACGA TTATAGGCTT CTGTAGATTT AACCACTATA TACAATTCAA	10260
TCATTTTAGA ACGATTTTGC AGATATTTT TTAGTGGTTG GAACATGGAT ATCACACCCC	10320
AAACAGAAAT GGCTACTAAA AGAGCTCCCT CATAAG	10357

(2) INFORMATION FOR SEQ ID NO: 192:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 6867 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

CGGGACATTC TCAATCTCT GTCTTTTGGT TTCTCTCTCT TCTATGATA CAATGGAAAA	60
AATAAAATCA AAGGAGTTT TTTTATGACT TATCCAAATC TCTTGGACCG CTCTTTAACC	120
TATGTTAAGG TCAACACGCG CTCTGATGAA CACTCTACTA CTACTCCAAG TACACAGAGT	180
CAGGTTGACT TCGCAACAAA TGTCTTAATT CCTGAAATGA AACGTGTGG ACTGCMAAAT	240
GTTTACTATC TACCGAATGG TTTTGCTATT GGAACCTTGC CAGCCAACGA TCCGCTTTTA	300
ACACGTAAGA TTGTTTTTAT ATCGCACATG GATACTGCTG ATTTTAAATGC TGAAGGAGTC	360
AATCCACAGG TAATTGAAAA CTACGATGGT GGTGTGATTG AACTAGCGAA TTCTGGTTTC	420
AAACTCGATC CAGCTGACTT CAAGAGTCTT GAAAAATATC CAGGACAAAC GCTCATCACA	480
ACAGATGGAA CAACCTTGCT AGGTGCTGAT GACAAGTCAG GAATTGCTGA AATTATGACA	540
GCCATTGAAT ATCTAACTGC TCATCCTGAA ATTAAGCACT GTGAGATTGG TGTGGTTTTT	600
GGTCCAGATG AAGAAATCGG TGTGGTGCC AATAAATTTG ATGCAGAAGA TTTTATGATG	660
GATTTTGCTT ACACCTGTGA TGTGGGTCCA CTAGGTGAAC TTCAGTACGA GACTTTCTCA	720
GCGCTGGTG CTGAATTGCA TTTCCAAAGT CGTAATGTCC ACCCTGGTAC TGCCAAAGGG	780
CAGATGGTCA ATGCCCTTCA GCTAGCAATT GATTTTCATA ATCAACTTCC AGAAAAATGAC	840
CGACTCGAT TAACTGAAGG TTACCAAGGT TTTTACCATC TAATGGATGT GACAGGTAGT	900
GTGAGGAGG CGCTGCAAG CTACATCATT CGTGATTTTG AAAAAGATGC CTTTGAAGG	960
CGTAAAGCAT CCAATGCAATC TATCGCTGAT AAGATGAATG AAGAATCTGG GAGCGACCGT	1020
GTCACTCTCA ACTTGACGCA CCACTACTAC AATATGAAAG AAGTCATTGA AAAGATATG	1080
ACTCCAATTA CCAATTGCTAA AGCCGTTATG GAAGATCTAG GTATCACGCC TATTATCGAA	1140

1158		
CCAATCCGGG GTGGAACAGA CGGCTCTAAG ATTTCTTTFA TGGGAATCCC AACTCCGAAT	1200	
ATCTTTTCAG GTGGCGAAAA TATGCACGGA CGTTTGAAT ACGTTAGCCT TCAGACTATG	1260	
GAACGTGCAG TTGATACCAT CATTGGCATT GTAGCTTATA AAGGCTAAAA AGACGAGGTA	1320	
GCTCAGCTAC TTCGCCTTTC TTTTATTTCT ACTGGTTTTT CTGTATTTC AGTAGTTGTA	1380	
GAGATTCTG TTGTTTCATT TTCTGAAGTT GATTCAGCAG GTTTAGAATC TCTGTATTG	1440	
CTTGCTTGT TTTGTCGCT AGCAGTTTCA ATGTTAGATT CTGCAGTTCG GTTGTGTTGG	1500	
TTCTCAGCAC TGGTGTATC ACCATTTCGT TCAGCATTC TTGCTGSACT TGTTCCTTCA	1560	
CTTGCGCTAG CTTTTCAGTG GATTGTATGA TTCAAAACTA GAATACTTT TGTCGATTCA	1620	
AGTAAAGCTG TTTTGTCTT ACTCTTAGCA GAAAGTTGAT CTATAAATGC ATCCACCTTA	1680	
TCAAAGTCG CATCAGATCC ATTATTACTT TCTAAATAAG AGTGAAGCGA CATGAGAATA	1740	
TGCTAGAGTT TTTGATAGAG TACAAGTGTG TGAGGATCTT GCTCAGCAAT TTCTTTTCT	1800	
TGTTGAAGGG CGCTAGCGAT ACGAGTCAAG ACATCTTTTA CCGACTGTT TACTTCATCC	1860	
AACTCTGAT CAGCCTTGT TGTGGCAGCT TTTAGATTTT CTACTTCTTC TGCCAAGGAT	1920	
TGTCNGATTC CTCTTCATG GATTGTTCG AAGAGTTGAT TTGCTTGTCT CAAAAGACTT	1980	
TCTACTTCTT CTTGCTATC TGTCGAGAT TATTGGTTGC TATCTACCAT GTACTCTTAA	2040	
AACAGGAGAG TTATAATCCA AGATTACAAG GCCTTACAGA AATAAGAAAT CCAGATAAGA	2100	
CAATGTTCTG CCAAGAGCT ATTGCTTTCG CACAGCAGCA CGGATTCAAT ATGCTTTAAT	2160	
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TCTTTGTAGA TGCTTCTGCT ATCAGCTAGA AGTTGATCTA CTTTTGCCAA GACTGCCTTC	2340	
TCATCAAAAG TTCCAGGTTG ATAGTTGGAT TGCAGGGATG GAATCTTGT TTTCAAAGCC	2400	
GCTTCATATC CCTTAGTTG AACCTTGATG TAGTGATTGT GGTGCCCATG AGGAATCACA	2460	
AAACCTTCTG AATCTTCACT TATAATTGGA TTGGCATCAA AACCATGACC ATCTCTCTCC	2520	
TCATGATGGA CATGTAGTGA CGGATTACTT AATACAGAAC TAGAAGAATC TCCTACCTCT	2580	
TCGGTGTTAG AGTGTGATGG GGGATTGTTA AGAGATGACT TAGGAATATA GTGATAGTGA	2640	
TCCCATATGC TTACTATATA AGCATCACCT GTATCTCTGA CAATATCATT AGGGTTAAAG	2700	
ACATATGTGG CTGCTAATTC ACCTGCCGAC AAGTCACTCT CAGGAATGAA ATGATAGTGA	2760	
CCACCATGTG GTACTATAGT AGATTGAAAT AGAATATGAG CAAATTGATA AGGGGATTTT	2820	
AAAGTAATTT CTAAACATGA TTTAGAAACT ATGATGTGCT ATTTCTAAAT CAATCACTA	2880	
TATATAACCA TCATCGGTAG TATAACGTCC CTGPAATTTT GCTACAGATA CTCTGCACCT	2940	

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AGCTCCTTTA TCGTCTTIAC CATGTTCTTG TTTTGGGCGA TTGATTTTCAT CTTTGTGTGC	3000
TACATTTTCT GCATGAGCTT GATCTTTAAG GTAAACATAA TACTTTCCAT CTACCTTAAT	3060
AATATATCCT CCCTTAACCT AACTGACGAT ATCTTGATCT TTCGGCTGAT AGTTGGGGGC	3120
TTTCACCTAA AGCTCTTAC TAAAGAGGCG ATCAAAAGGA ACTTTACCAT TATAGTAGTG	3180
ATAATGATCG CCATGAGAAG TTACATAACC TTGATCTGTA ATCTTAATAA CAATTGTTT	3240
TGCTTGAATT CCTTCTTTT GACTAACCTA GTCGAGAGTC AAATTTTCAG TCITCTTAGT	3300
GTCCTTATTA CTGTTTACAT ATGAACACAG ATTTTATCT GTATTGGCCT GTTAGCTATG	3360
TTGTTTCAGA GCATAAACAC ACAGACTTAA GGAAAGGATA ACAACAGATC CAGCTGCTAT	3420
ATATTCTTTT TTAATTTTCA TAATTACCTC ATTTCTATAA TTAATTATAT GATGCTCTCA	3480
TTATTAAATG ATTAATAAAA TTAATTAAAC AATTAAATAA CTAGTAAATA TTCCACCTCT	3540
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CAGAGTTTAA TTCTTAACCT TTGAGAGAAC TTCAATTTTG ATTCAGACTT TTCTACTGTC	3660
TATTCCTTAC GCTATGAGAT CAGATAAATT CTTTTTATC ACTCTCCAC TTGGCAATCT	3720
TAAATCAATC GTTCCATCCA TAATTGAATAT AACACTATCT AAGCCTAATC CGTAAGCTAGC	3780
TGTAATTTT TCTAATTTT CTTGTACAGG ATCTACTGCT GGAGCTTCCT CTAATGCTGG	3840
ATCTAACATA GGGTCACTCC CCACATTCCC TTCTGGATTC AACATTCCAT TATCGTGTGA	3900
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TTCAACATTT CCTTGAGGTG CTCTCTCTGT AAAATCTGCC ATATTCTTTT TAATGACTTC	4080
TCCCGATGGT AAATATAATT CAATTGTGCC GTCCATATTA AACAGACAT TTCTAGCTTT	4140
CATCCCAATA CTTTCAGCAA ATTTGCTAC TTTTCTTGT ACAGGATCCA CTGTAGGAAC	4200
TTCTCTAAC GTTGAATTAC TAGTACTATT CCCAGTTTCA GAAAGTTTCT CTTTTCTAC	4260
CTTCTACTA GTCTTGGTT CTCTACCTT TTCACTAAGT TTTAAGTTT CTGTGCTTT	4320
ATTCCTTTTA AATGTGGTA GAATACTTGG TTTATCAGTT TGATTTTCTT TTTCAGAT	4380
AGGTACTTCC ACAATATAAG TCGATTGATT GTCCAAATAA GCATTTGCCA TGAAGGTTAC	4440
AGGAATTTTA TTTCCGGCCG TTCTGGTGT TCCTTGGTTT AATTTCGGAA TCGGTAATTT	4500
GATTTCAACA ACTTTATAGT TATTTCTTAA ATAAGCATTT CCATGAATTT CATCAACAC	4560
TCTGACTAAA GCATCAGTTC CTTTAGGCAC TGCAAAATTGA GGGTTCACCT TTAATAAGT	4620
ATCCCTCGCA TGGAAAGGAT AGAAATCGT TTGACTGGCC ATTTGTAAAG CTAAGAGGT	4680

	1160	
TGGAAGTGA AATGTACCAT CATAACTTAC TTCTGGATAA TCCTTTGAAG CGATAGTATA	4740	
CTTAAATGTT TGCTCTGGTA AATAAGGTTG ATCTAATTCA AAGTTTGCAA TATTCCCTAC	4800	
TCCTTCTCCA AATACCTTAC CAGATACTTT CTCCATACT TTTCATCTCG GTGTATTATA	4860	
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GCGTTTTTGA CCATTGCTA GAGTAAAGTT TGAATTATA AACGTACTAT TTTTAAACA	4980	
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TCCTTCTTGG GGTTTAAACA GTTCATAGTT ACTGTGAGAA TGACCAATTC CAACCGGTTT	5100	
ATGTTATCA ATCGGACTCG CATGATGGTG ATCTCCATGC GGATAAATA TCGCATTTTT	5160	
TTCTTTATTG ACGACAATAC TTTCACGTTT GACACCATAT TGTTTCATAA TGCCAGCAAT	5220	
TTTTTCTTCG ATTTTTTAT CTAATCTTTT CATTTCTTGG GCATTACTTG GATAATCCCTG	5280	
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CCGTGACTCA TGACAAAACC TGATTTCATCT TCAGCGATAA TACGATTAGC ATCAATCCG	5460	
TATCCATCTT CTTCATGTTT CTCAATGAA GTTCTCTGGT TGATTGGAAG AGATGGAGAA	5520	
GGTGTGCTA GACTATTGTT TGGAAAGATC GGTTCGCCAA TTGATTGA TTTTGGAAATG	5580	
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GAAGGATTCG TTGAAGACT GCCTAGACTA GACACTACTT CATTAGGTTT TGCATTTGTA	5760	
GAAACTGTAG AACCGATTCC ACTGATAGGC ACCATTCTGG CAATCTTTTC TCTAAGGCA	5820	
GAAAGCTTGC TGTAAAGGAA AAAGTGATAA TGGTGGCAT GCGGAATCGC AACTCCATTT	5880	
GGTGTACGAC TGATAATCTT AGCAGGGTCA AAGACCAGGC CATCTGATTC ACTGTAACTG	5940	
TGGGCGCTAG GTGAATCATA GAGTTCCCTC AAAAGACTCT GGAGATTTTC AGATTTATTT	6000	
GCTGGCTTGC TAGTTGATCC TTTTGTCTACA GATTGCGTGT TATTGTCACT AGCTGTGAA	6060	
GAATAGCTTA ACTGACTCGG TTGCATATTT TTTCAGCCA GATGTGCTTT AGCTGTCTCT	6120	
AATTCACTAG CAGATAAATC GCTTTTGGGA ATGTAGTGAT AGTGACCTCC ATGAGGAACG	6180	
ATATAAGACT TACCCGTATC TTGATAATA TCAGCTGGAT TAAAGACATA ACCATCATTT	6240	
GTCTATATAT GTCCCTGAGA CCTTGCTACA GCAACATTAG AGTTAACCTT CTCATTATCT	6300	
TTGACATGTT CTGTGTTTTG ACGATTGATT TCATCTTTAG TTGAAACATT ATCAGCATGA	6360	
GCTGCATCTT TCAGTGAGAC ATAAATATTT CCAATGACTT TGATGATATA ACCACCTTTG	6420	
ACTTCATTGA CAATATCAGC GTCTTTAAGT TGATAGTTTG GATCCTTCAT CAAGAGTTCT	6480	

1161

TCACATAAGA GGGCATCATA AGGAACCTTC CCAATATAGT AATGATAGTG GTCACCGTGT	6540
GACGTACAT AGCCCTGATC TGTAAATTTG ATTACAAATT GCTCAGCGTG AATTCCTTCT	6600
TTCTGGCTAA CCTGGTCTGG TGTCAAGTTT TCACTTTTCT GACTTGACTG GCTGCCATCC	6660
ACATAAGAGA CACGATPATT GTCCCTATTT TCCTGCGAAC GATGCTGGT TAGTGCAATAG	6720
GCACATAGAC TCAAGGATAC GATAACAGCT GATCCAGCTG CTATATATTT TTTACTAAAT	6780
TTCATAAATC CCTCATTTCA ATAAATGATG AAGTTTTTTC TCAACTTCTT TTACTTTATT	6840
AAATAGTTTT CTAACCCGG GGGTACC	6867

(2) INFORMATION FOR SEQ ID NO: 193:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 999 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

CGTCTCAAAA ATGCAGTACG TTTGATTGAG AAATCAGTTA AAGGTATGCT TCCACACAAT	60
ACACTTGGAC GCGCTCAAGG TATGAAGTTG AAAGTATTTG TTGGAGCTGA GCACACTCAC	120
GCTGCAACAC AACCAGAAGT TCTTGACATT TCAGGACTTA TCTAAGGAAA GGAACAATAA	180
AGTATGTACAC AAGCACAATA TGCAGGTACT GGACGTCGTA AAAACGCTGT TGCACGGGTT	240
GCGCTTGTTT CAGGAAGTGG TAAATCACT GTTAACAAAA AAGATGTTGA AGAGTACATC	300
CCACACGCTG ACCTTCGTCT TGTATCAAC CAACCATTCG CAGTTACTTC AACTGTAGGT	360
TCATACGACG TTTTCGTTAA CGTTATAGGT GGTGGATACG CTGCTCAATC AGGAGCTATC	420
CGTCACGGTA TCGCTCGTGG CCTTCTCAA GTAGACCCAG ACTTCCGCGA TTCATTGAAA	480
CGGCGAGGAC TTCTTACACG TGACTCAGT AAAGTTGAAC GTAAGAAACC AGGTCTTAAG	540
AAAGTCGTA AAGCATCACA ATTTAGTAAA CGTTAATTGG AAAGAATTAC TATACTTATA	600
CAGAGCACCT TTCGGGGTGT TCTTTTITTA TACTTTCTTA CTAATTTGGT GCAATTGACA	660
CAGTTGTTGC GACTTTAGTC GCTTACAAAT GTGGCTGCAA CCTGACATGG TCAAGTGCCT	720
CAAAACGTTA ATCAATACGA TTATATCAAC GTTTCAAAGC ACTCAAGGGT TTACCCATAG	780
GGTGCTTTTT TCTATACTTT CTAAGAAAGT TTACCCATAA ATTTGCCCTA AAATTACCC	840
ACTTATTTTT AAGATGTTGG TAGGCACTTT GTCCACAGCA TAATGGAAC	900
TATTAAACATA AGTCTTAGTT GTACGGTAT CGCTATGAGT TAATGCTTCA GAAATGGCTT	960



1152

CTAAGCTCAT TCCTGCTTTT TTAGCAAGTG TCGCTCCTG 999

(2) INFORMATION FOR SEQ ID NO: 194:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2315 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

AATATTATCA CTGTTCTTGA AGCAGAAACA CAAGCTGTCA TCCGAAATCA CTTCTTTCGC	60
TACGATAGAG CCGTTCGTTG TCAAGTGAAA ATCATTACGA TGGATATGTT TAGTCCTTAC	120
TATGACTTGG CTAACAGCT TTTTCCGTTG GCTAAAATCG TTCTAGATCG TTTCCATATT	180
ATCCAACATC TCAGCCGTGC CATGAGTCGT TTTCTGTGTC AAATTATGAA TCAGTTTGAA	240
CGAATATCTC ATGAATACAA GGTATCAAG CGTTACTGGA AACTCATCCA ACAGGATAG	300
CGTAAACTCA GCGATAAACG TTTTATGCG CCTACTTTTC GCATGCACCT AACAAATAAA	360
GAAATCTTGA ACAAGATTIT AAGCTATTCA GAAGACTTGA AACACCACTA TCAGATCTAT	420
CAACTCTTAC TTTTTCACCT TCAGAACAAA GACCTGAGA AATTTTTCGG ACTCATTTAG	480
GACAACTCTA AGCAGGTTCA TCCTCTTTTT CAGACTGTCT TAAAAACCTT TCTAAAGAAC	540
AAAGAGAAAA TCGTCAACGC CCTTCAACTA CCTATTCTAA ACGCCAAATT GGAAGCGACC	600
AATATCTCA TCAAACTTAT CAACGCAAT GCCTTTGGTT TTCGAACTT TGAAAACTTC	660
AAAAAAGGCA TTTTATGCG TCTGAACATC AAAAAAGAAA GGACGAAAT TGTCTTTCT	720
CAAGCTTAGC TTTTCTTCAA CCACTACAG TTGACAAAGA GCCTATTTTC GCTGATTCTC	780
CACTACATTT GACTGGATTG TAATTTTTTA GAGAAATACA AAAGAGCTAG CTTTAGCTAG	840
CTCTTTTCTC ATGCGAGAG AGGACTTGA ACCCTCACGA CCTAAGCGG TCACAGGATC	900
CTTAGTCTCG CGGTCTGCC AATTCCGCCA TCCCCGGTC GATTACTTTA CTAGTATATC	960
AACTTTGGG ATGCTTGTC AACTTTTTTT TCAAAATTTT TCATTTTTCAC CAACAGGTT	1020
ACTCAAAAG TTACTTTAGA TTTTCATCTA CTAACTTAGC TCCAGTGTA TTTTGAAT	1080
GACTTAGGC AAATTGATGA TTTTCAGGCC AGATGGAAGC AACAGCTGGT TTAACAATCT	1140
CGATGTCATA TCCTAGATTA TAGGCATCTA TAGCTGATG TAGGACACAG ATATCCGTC	1200
AGACACCTGT TAAGATAACG GTAGACACTC TAGGCTCTCT CAAACGAATA TCTAGGTCAG	1260
TCCCTGAAA AGCTGAGTAA TGGCGTTTAT CCATCCAAA GACACGACTG TCTGAACCAT	1320
GCTCTTGATA AAAGATCCCC AAATCTCCAT ATAAATTCGC TCCACTGTC CCAATCAGAT	1380

1163

TATGAGGAGG AAATAACTTA CTTCCTGGAT GGAACAATC GTTTCCTCA TGAGCATCAA 1440  
TACTAAAGAA GATATAATCT CCTCGTTCAA AAGCTAATCG AGTTACCTTG CTGATGCGAT 1500  
CCGAAATCGC CTGAGCTGGA GCACCTGCTG TTAGTTTCCC ACTTACAGCA ACAAAATCTT 1560  
CTGTATAATC AATCGAAAT AAAGCCTTTG TCATTAGTAA TCTCTTTTCT TCACCTCTTC 1620  
AAAAATATCT GAAATCAAGA CCTTAAGATA GGTTCCTTC ATTCCAAGTG AGCGACTTTC 1680  
AATAATCCCC GCAGACTCAA GTTTACGAAG AGCATTGACA ATCACAGAGC GAGTGATTC 1740  
GATAGCATCT GCAATCACTG ACGCAGTCAA CTTCCTTCA TTTCATTTA ATTCCCTAA 1800  
AATTGCTGAA ACAGCAGGA GTTCGGAGTA AGAAAGGTA TTGACCCCA TGGTGACAGC 1860  
AGTACGACGA CGAATATTTT TCTCATCTTC TTCACGTTGG AAGTTAAGAA GCTGAATCCC 1920  
AACAACGGTA CTGGCAATCT CAACAAGAAC CAACTCCTCA TCTTCGAATT TTTTATCATT 1980  
ACGCCAAATA ATCAAGAAGC CAAGGCGAAT CCCGATACA TGAATCGGTG CAATAGTCGT 2040  
CAAGCCATCT GGAATAATCT CTCTACTCTC AATAGGGAAT ATACTCATAT CATGCTCAAC 2100  
AGGCAGTTT GCTTCTGTTT CGTAATTCAT ATTAGCCCTT TGAACGTAGT CATCTGGGAA 2160  
AATCTTATGT TGAAGAATAT GCTTACGCGA TCTGTATTTC TTTTATAACG CMTAAATAG 2220  
CCAAGCAGAC GTCCCTTACT ATTGATAATG CAGGCATTCG AATGAATAT ATCCGCTAAC 2280  
TGACCGGTAA TAGGTTGTA AGGGAGCTCA TCTCG 2315

(2) INFORMATION FOR SEQ ID NO: 195:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 6693 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

CGATTCTTTC CATTCTCTCA AATAAGAATA CTTCATCTGA CATATGTGTT ACCTTCTTCA 60  
TCAAAAATTA TTTTGTATC GATTACATTG CAGATCGTAA CATAAAGAAA AACAGATGTC 120  
AATATATTAA CGTAAACA TGGTCACTAA AGAAGTATA GAGAAAAGT AACCTAGCG 180  
ACCGATGAA CCGTGGGTGG TTGCTTTTCG ATTGCTCTCT TCTCTTGTGT TTTTCTGTTC 240  
TTCTTCTTGT TTTTCTCTAG CTTCCTTGGC CTCTTGTTCG GCTTTTTCCT CAGCTTCCAT 300  
AATTAAATTA TCCGCCACAG TGTAGCTGTA GATTCCAGCT TCCATGTGGA CCACACTCGG 360  
TTCTGCAAT TGAGGCTTAA TCTTACTGTA ATATGGCAGT TTCTTACTCA TTTCAGATAG 420

1164

AGGAACCAAG	ACTTCGTCGG	AATCATTCAT	GGTCAATCGA	ATTAAATCGG	ATGTCACCTT	480
GCTTGGGGCT	AATTCACCTT	TTTGGATAGC	CGCCTTGAGT	TCTGGGCTAA	TTTGAGCAAG	540
TTCTGAGACA	AAAACCTTGA	TTTGTTCACCT	ATCATTAAG	AGAAGCTGATA	AATAAGTTTC	600
TGGTAAACGT	TTTCAAGTCA	CAGAACTAGT	CTCAAGCTGA	CCACTGGAAA	GAATAGGATA	660
ATGATTTTCA	CCAGAAATAT	AGTAGGCCAC	AATATCATAT	TCCTTGACCT	TAATAGTGAA	720
CTTAGTTTGA	AATTGATAGA	CAAGTTGAGC	TGATTCAACC	CAATAGTTAG	ACTTAATCTG	780
CTTTTCATAT	TTTGCCCTGT	CTAGCAGAAG	GTTAATCGTA	TAATCCGAAT	CCTGAATGCC	840
TGAAGCCGTG	CGAATATCAT	CAGCTGTAGT	TTGCACCGTT	CCCTCAACAC	GAATATCTTT	900
CATGGTCGCA	TAAAGACTGA	GCAAGTAGGC	AGAGACAAAC	AATAGAAGCA	GACTTGGAAG	960
TAAAACTGCT	AAGGCTCGCA	AGATATGGAT	ACCAGGAATC	TTTGCTTTGG	CTGGTTTTTC	1020
CTTTGTAGCC	TTTTTAGCAA	GCTTTTTATC	CTGTTCTCTC	TTCTCTTTAG	ACTCTGGTTC	1080
TTCTTTCTCT	TCTTTCTCTT	TGTCAGCCTC	TGAGGATGCT	ACTTTTTCCT	CAGACTCTTC	1140
CTTAGCTGAT	CTGAATCTT	CCTGGTCTGT	TTCACTCTCC	TGGTCTCTGT	TATCTCTTGA	1200
CTTCTCAGAT	TCTTCTCCCA	TTTGAGCTTG	TCTTTCTCTT	TCCTTCTCCT	CAGCTAGAGC	1260
CGCCTCTCT	TCAGCCTTCT	TTTTTAGATA	TTCTTTGGTT	CGTTTCTGCC	ATTCTGATAA	1320
CTCTTTCAAT	TCTTCGAGGG	TTTCTTTTGT	CTCATTTTTC	TTATCTTTTG	ACATTTACTT	1380
TCCTTATGAT	AAATCTTTTT	TCAACAATTC	ATAAAAAATC	GCTAGAGATT	TCAATTCCTT	1440
AGAAGCTTTC	ATCTTAGCTT	GGTAATCTTC	CTTGTGACTT	AGTAAGTGAG	AAAGCTTCTC	1500
TTCCAAACTA	TCCAAGTCA	AATCGCTTTC	TTGAAGGTCT	TCTGCATAGC	CTTTCTTAAC	1560
AAAGTAAGCT	GCATTTTCAA	TCTGGTCACC	ACGACTAGCT	TCACGACCAA	CGGGCACAAT	1620
GACATGCAAT	TTTGCTATCG	CCAAGAGCTC	AAAAATCGTA	TTGGCACCCAC	CTCGTGTAC	1680
AACAATATCA	GCCAAATCCA	TCAAGGGTTG	ATAGAGATCG	GTCACATAGT	CAACACGAAA	1740
AAGATTTTGC	CTCAACTCAT	TCAGACTAGA	ATCTCCAGTT	AGATTGATAA	TATTGTAGCG	1800
CTCTGTAGT	TCTTTCTTAT	GGTCTGTAC	CAATTGGTTA	AAGACACGAG	CGCCTGCAGA	1860
ACCGCCAAAC	AAACATACAG	TTGGCAATTT	GGGATTAAG	TGGGTTTGAA	TATCCACCAA	1920
TTCACTGTGT	TCTGGAGTGT	TTTTGTCCGA	AACTTTGGTC	ACCGCTCCCA	CATGCTCAAC	1980
CTTAGCCAAA	CTCGAAGCTT	GTTCAAAGGT	TGANTACATC	TTAGTGCCAA	ATTATAGGC	2040
GATTTTATTG	GCCAAGCCCA	TAGACAGGTC	AGATTCTGTGA	ATAAAGACAG	GCATCTCTGA	2100
CACACGCGCA	GCGATAACAG	GCGGTACTGA	GACAAAGCCC	CCCTTTTGAA	AAAGGGTCTG	2160
TGGACGCAGT	CGCAACATGA	TAAAGAGCGA	TTGGACAATT	CCCCAACCAA	CTTTGAAGAC	2220

1165

GTCCAGCATA	TTTTCGCAAG	AGAAATAGCG	ACGCAATTTT	CCAGTCGCAA	TAGAAATGGAA	2280
GGTGACATCC	AAACCTGACT	TAAGGATTTC	TTGGTGTTCG	ATACCACT	TGTCCCGAT	2340
ATAGTGGACT	TCCCAACCAT	CTTCGATGAA	CTTGGCATTT	AACAAAAGAT	TGAGGGTAAC	2400
GTGTCCAAAC	GTCCCCCAC	CTGTAAAGAC	AATTTTTTTC	ATATTATTCT	TTTAACTCCG	2460
CTACTGTGTC	GATAAAGAGC	TGCGCACGTA	CTTCAAGTT	AGCATACATA	TCCAGCTAG	2520
CATTGGCAGG	ACTAAGAAGA	ACCACATCTC	CTTGAGTCGC	AAGCTCATAG	GCCTTGGGG	2580
TCGCATCTGC	AATATCTGTC	GCCTCCACAT	AAGCGACACC	AGCCTTGTCT	GCTGCCCGTT	2640
TGACACGTTT	TGCAGATTGA	CCGAGGATGA	CCATCTTCTT	GAGTCAGATA	ATGTCTGGCA	2700
CCAATTCGTC	AAACTCATTTG	CCACGGTCCA	AACCACTGTC	AATCAAGACG	ACCTTGCTGT	2760
TGTCAAATCC	TGACAAAGCT	TTTTGAGTAG	CCAAGATATT	AGTTGATTTA	CTGTGCTTAT	2820
AGAATTTAAC	ACCCTTGATG	TCATCCACAA	ACTGGAGACG	GTGTTTGACA	CCACGGAAG	2880
CTGAAGAGT	TTCTTTGATG	GTPTGATTGT	CCACATCAGC	AAGCTTGGCT	ACAGCAATAG	2940
TGCGAAGGGC	ATTTTCCACA	TTGTGGCTAC	CTGGAACACC	GATTTCAATTC	GCTGCCATGA	3000
CTACTTCCACC	ACGGAAGTAG	AGTTGACCAT	CTTCCAGATA	AGCTCCATCA	ACCTTTTCAA	3060
GTGTTGAAAA	TGOTACAACA	GTGGCTTCTG	TCTTGGAAAT	CAAGTCTTTT	GCCAAGTCTT	3120
GATTAAAGTT	CAAGACAAGG	AAATCAGCTG	CTGTCACTCT	GTTCCTGGATA	TTCCACTTGG	3180
CTGCTACATA	TTCCGAAJAT	GACCCATGGT	AGTCGATATG	AGTTGGCATG	AGGTTGGTAA	3240
TAACCGCAAT	CTCTGGATGG	AATTTCTTGA	CACCCATGAG	TTGGAAAGAA	GAAAGTTCCA	3300
TAACAAGCGT	GTCTTATCTT	GATGCTATTT	GAGCAACCTG	ACTAGCTGGA	TAGCCGATAT	3360
TCCTGTATAA	AAGACCATGT	TGGCCAGCAG	CAGTCAAAAC	TTCCCCAATC	ATAGTCGTG	3420
TGGTTGTCTT	ACCGTTCGAT	CCTGTGATAC	CAATAATCGG	TGCTTCTGAA	ATCAAATAAG	3480
CCAATTCCAC	CTCAGTCAAG	ACTGGAATTC	CCTTGGCCAA	AGCCTTTTCA	ATCATGGGAT	3540
TGTTGTAGGG	GATACTGGA	TTTTTCACCA	TAAAGGCCAA	CTCTTCATCC	AAGAGTTCCA	3600
AAGGATGGCC	ACCTGTAATG	ACCTTGATCC	CTTCTTCCAG	CAAACTTTGG	GCAGCTGGAT	3660
TGTCCTCGAA	AGGTTTCCCA	TCATTACTG	TCACAAATGC	ACCTAGCTTG	TCCAACAAC	3720
GAGCTGCAGA	TTCAACGAGC	TTGGCCAAAC	CTAAACAAG	GACTTCTCTA	TTTTTAAATT	3780
GATCTATTAC	TTTACTGTCT	CGAACTCCAT	TTCTACTCCT	ACTATTTTAC	CATTTTATG	3840
GAAATAAAAA	AGCCACAAGG	TGTGTTTGTG	ACTCTTCTCT	CTAACTGAAT	CTTACCATAT	3900
CATCTATGTG	ATAAATCGGT	AACTCGAATG	ACCTGATCCA	CTTGCTCCCA	AATCAGAGGA	3960

1166	
TTATGGGTCG CAATAATAAT GGTCCGATTC GGATTTTTTA AAGATTCTAG GATGAAAAGT	4020
AATTCCTCAG AGTTTTTGGG GTCTAAGGAA GCGGTTGGTT CATCTGCGAG GATCAAAGGT	4080
GGATCCTTTA AAATATCTTT CGCTAGTGCA ACAGCTGTGT CTCTCCTCTC TGATAACTCA	4140
AAATATAGTT GCTTCAAAAT CAAATAGAG AGGTTTACAC GGTTTAGAGC TTGTTTCATC	4200
AAAGAGATTT TCTCTTTTTT CTTCACCTTT TTACCAACTA AACCCAGATT GAGATTCTCT	4260
TTGACGGTTT GGCTTTCAT TAAGCCAAAA TCTTGAATA AGTATCCTAA GTAATCTCTA	4320
AAGAAAACAG AAGGCTTGAT GTCTTTAAGA GAAGTGCCAT CATAGATGAT TTGCCCTTTG	4380
TCATATGGCT CCAATCGTCC AATCATATTC AAGAGTGTG TCTTACACCA GCCACTTGTA	4440
CGATTAAAG CATAAATTTT CCCACCTTCA AAATGAAGAT TCATATCTGA AAATAGCTGA	4500
CGGCTTCCAA ATTTTTTAGA TATATTCTTT AGTTCAATCA TCCTATTTTC CTTTCATAAT	4560
TGTCTAGAAA ACACGAGATT CTTTCTGCGC TTGACGGTAA AGCGTCAAAA CTGCACTAGC	4620
TAGAAAGACC AATAAAGTGA GCAAGCCAAT CACCAAGTCT CCACTGCTTA AATAAAGAG	4680
ACTAGCACCA AATACAAAAC TAGCAAAATG GCTAACCAT TACTGAGCAT GTGTTTCAAA	4740
AAATCGTAAA CCTGAATTC GTTTAATCAA GATATCTCG CGGAATTGCT CGAAATATAG	4800
AAGATTGACA GAATAAAGGA GTAAACAAGGA ACTGGCTATT CCAACAATAG CTCTTAAGAT	4860
TAAAGTTGCT GTTTCAGTTT GAACCTTCTT ATACGAGTT AGATAAACAC TTCTTCTCTC	4920
TTTAAGATAG GATACTTGCT CATAAATTC AGGTTTCTTC AAGAGTTCTA GCCCACTCTC	4980
ATATCCTTTG ATAAAGAGTT GTTTTCCAGC ATGTATAGAC CAACATAGATA AGGATATAAA	5040
ACTATCAGCT GTAGAACTCG GCGTGAATAC CACTAAAATC GGATCAGTCA AATACTGAGT	5100
AGATACGGGA TTCTCACCGT TATTATAAAC AAACCGCTTT TCTCCCATTG AAAGATAACT	5160
AACGTGCGCT TTCATCTCAT AATCCAAAG AGCACTTGCC TCCTCACCAG ATTTTCCATA	5220
ATAACTCAAT TTTTCTTCAA AAACCTTCTT AAGTTCTGCT TCTCGAGAGC GCAAATGTTC	5280
TGGGAGCAAG AGGATAAAT CACCTTTTTG GAGATGGGCT AACTTCTGTT TGCTCTCAGC	5340
ATCTACCACG ACCTTTTCTT TGTCCAAATA ACTGGGACTA ACATAGAGCG TATTAGCATC	5400
TGACTATAG GTATCCAGTG TCTCTCCCTG TTCATTTTTT CCTGTGGATG TGGCAAAATG	5460
GAGCAGATTA TCCTTTACAT AAGAGAGCTT TCTTCTTCG ATTGCTTCTT TGGCAAGGC	5520
ATACCACTTG CTGTGATTTT CTGTATCTTT TCCTCTATCA CCTAAGCCAA AGGAAATCTG	5580
GTAATAGTCT GCTCTGTCTT GCCATGCTTG TTTTGAATTT TCAAGTTCTT TCAATCGTTG	5640
GTAAGACGTC AAACCTGTCT TAACAGCOTA GCCTACTGTA AAACACGCTA CTAACGTACA	5700
CAATAGGGTT AAAGCCATCA AGCCTTTAAG GGGTAATCTT CCCTTAATAA CGGGAACATA	5760

1167

TGCTTTGTAA	CTCAAACTCA	TTAGGTAAAG	GAGCATTAGT	AAAATTGAAA	TCGCCAATAA	5820
AAACAACAGA	TAGAAACTAA	TCCCAAUACC	ATAGGTGGCT	AACAAGATAG	GATAAAACAA	5880
ACCTTGACTA	AAAAGAACGA	CTCCCCACC	TAGGAAGGAA	AGGAGGGCTG	ATAGAAGGAG	5940
CCATTGTGATA	TCAGTAGATA	AAGAATGCCC	CATGATGGAT	AAGAGAGTCT	GACCAGAAAA	6000
GAGTTTTATA	CCTGTGCTC	TCATTTCCTT	AATCCGAGTG	ATAATCACTA	AAGCAAAAGAA	6060
AGATAAGCCA	AATATTGCTA	AACTAATTAA	AATAAGGGGA	TTTAGTAATA	TTCGAAAAGC	6120
AAGAAAATAG	GGCGGTATCT	TTCCGTGAGC	ACTTGCCTTA	TAACCCAAAT	CTCCTAATTT	6180
ATCGGCAAGC	TTTTCTTTTCG	TCAAGGAGCC	TGACAAAAGG	AGATAACTAT	TTAGCGGAGT	6240
ATACGTTAC	GACTTCTCTG	GCTAGCTTCT	TGGAATCTTT	TTGGTAAAGT	TCCCTGACCA	6300
TAAAGTGAT	AAGTAAAGTG	AGTCGTCCCA	TCCTTACTCG	GCTCTACAAT	TCTTCTAGCT	6360
ATTAACCTCT	GTTCAGATT	TGCAAAATTC	TCCAAATCTT	GTTCAAATAC	CTCACGCGTC	6420
GOTTCTCTAG	TATCTTTTTT	GACACGAAGT	AAAGAAACGG	AATCATAGCT	TGCATATATA	6480
TATTGTGGCG	CACGTAAGAC	AATAATCCAA	GCAAGGAAGA	AGCTGAGAAA	AAAAGTTGAT	6540
AATAATATGA	ATAGTTTCTT	CATAGTAGAC	TCCTTGATAA	AAAAATCCC	CCTGTAATTT	6600
CTTACAAGGG	GAACGATTTA	AATCAATGAA	CGATTAGTCA	TAATCACAGT	AAAATGCTAC	6660
TTGTTCTCCC	CATTTAGTCC	AAATCCATGC	AGG			6693

## (2) INFORMATION FOR SEQ ID NO: 196:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 1847 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

CCGGTCTATG	TACCCACTAC	TTTGGGACAA	TATGGGGATC	AGCTACCCAA	AACTAATCGA	60
GCCTTTGGTT	GACCTTGCCA	AGGAAAGTTT	TGACAAGCGC	GACGATTTGA	TATAAAATGA	120
AAGAGAGGGT	AGAAGCCAGA	ACCATCACTG	CACGGTGACT	AGAGTTCTCG	GACTTCAGCC	180
CTTTTTAAG	GAGTAGAAT	GAAATTAACA	ATCCATGAAA	TTGCCCAAGT	TGTTGGAGCC	240
AAAAATGATA	TCAGTATCTT	TGAGGACACC	CAGTTAGAAA	AAAGTCAGTT	TGATAGTCGT	300
TTGATTGGAA	CTGGAGATTT	ATTTGTGCCA	CTTAAAGGTG	CGCGTAGTGG	CCATGACTTT	360
ATTGAAACAG	CCTTTGAAAA	TGGTGCAGCA	GTAACCTTGT	CTGAGAAAGA	GOTCTCAAT	420

1168

CATCCTTACA TTCTAGTAGA TGATGTTTTG ACAGCCTTTC AATCCTTAGC ATCCTACTAT	480
CTTGAAAAAA CGACTGTGTGA TGTCTTTGCT GTTACAGGTT CAAATGGCAA GACAACGACT	540
AAGGATATGT TGGCGCATTT ACTGTCAACA AGATACAGAA CCTACAAAAA ACAAGGCAAT	600
TACAATAATG AGATTGGCCT TCCTTACACA GTTCTTCATA TGCTGAAGG AACAGAAAAA	660
TTGTTTGTGG AGATGGGACA GGATCACCTG GCGCATATTC ATCTCTTGTC TGAATTGGCT	720
COTCCAAAAA CAGCCATCGT GACCTTGCTT GGAGAAGCCC ATTTGGCCTT TTTCAAAGAC	780
CXTTCAGAGA TTGCTAAGGG AAAAATGCAA ATTGCAGACG GAATGGCTTC AGGTTCCTTG	840
CTTTTAGCGC CGGCTGACCC TATCGTAGAG GACTATTTCG CAACTGATAA AAGGTGGT	900
CGTTTGGGCG AAGGGGCGA GCTGGAAAT ACTGACTTGG TTGAGCGCAA AGATAGTCTG	960
ACCTTCAAGG CCAATTTCTT AGAGCAAGCC CTTGATTTCG CAGTAACCTG CAAGTACAAT	1020
GCGACAAATG CTATGATTGC ATCCTATGTT GCTTGCAG AGGAGTTTC AGAGGAGCAA	1080
ATTGTTTTGG CCTTCCAAGA TCTGAATTG ACGGTAACC GTACCGAGTG GAAGAAAGCA	1140
GCCATGGGAG CAGATATCCT GTGAGATGTT TACAATGCCA ATCCAACCTG CATGAAACTG	1200
ATTTTAGAGA CTCTCTCTGC CATTCGAGCC AATGAAGGTG GCAAGAAAAA TGCAGTGTG	1260
GCGATATGTA AGGAGCTTGG TGACCAGTCT GTTCAACTTC ATAATCAGAT GATTTTGAGC	1320
CTTCTCCAG ATGTGCTTGA TACCGTGATT TTCTATGGAG AAAATATTGC TGAATTAGCC	1380
CAATTGGCCA GTCAAAATGT CCCAATCGGC CACGTTTACT ACTTCAAGAA AACAGAAGAC	1440
CAGGATCAAT TTGAAGACCT AGTCAAGCAG GTCAAGGAAA GCCTTGGAGC CCATGACCAA	1500
ATCCTTGCTCA AAGGCTCTAA CTCTATGAAT CTAGCCAGT TGGTAGAAG TTTAGAAAAA	1560
GAAGACAAGT GATTTTGTCA AGTATTGCA AAGAATGATT GCCATTACAG ATACTGGCTT	1620
AACCTTTACA AAAGATCCGT TTGACCGTGA GCGCTACGAA GACTTGCAGG GTCTGTTATC	1680
TGAAATGTTG AATCAAGCAT CAGACCTTGA TTCCGAGAA GTGGCAGAG TCTTGAAGCC	1740
AACTTCTGCT TATGCCACTC CGTTAATGGA CGTCCGTGCT TGGATTGTTG AGGATGAGAA	1800
GATTTGTCTG GTTAGGGGAC AAGGAGAGGA TAGTTGGCTT TTGCCGG	1847

(2) INFORMATION FOR SEQ ID NO: 197:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 1062 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

1169

CAAGCGAAAA	CATTTTTTAT	TCCAAATATA	CAGAGCATTT	TAGGAGAACA	AGAGATTG	60
AATGCCAAGT	CGATCTTGCG	CTTGCTAGAC	GGTTTGAGT	CACATAGCTA	TGATGTAGTC	120
TATCTCCGTC	AGCCTCTTAA	TCGCTCGAA	TATATCGAGT	GTGCGATAGT	GGGGCAATCA	180
CAATTTCTCT	TTAAGGTCAG	TTATGCTGAT	GGTCAAAAGG	CTTACCOTGT	CGATCTTCCT	240
GACCTACTAA	CAAAGACAGA	CTGGCAGATT	ATCAAGTCAT	TTTATAGATC	TTTGCTTGCT	300
TATACAGGGA	CTGATATTGA	AGGCTAGAT	GGTTTGATT	TTGAAGCTTA	TTTCCAAGCA	360
AGTATCAAG	CCTATCTAGC	AGACCTGTA	GCTCGTTTAA	CGATTGCCA	AGGAATTTTT	420
AATCCTATT	TCTTTATGCG	TGAGAAGTGG	AAAAGCTTTT	TAGAGGCAGA	TGGCTTGCT	480
CAGTTTGAAG	CGCGTGTGCG	TGCGGTTCAA	GAGACAGATG	CCTACTTTGC	GAGAOTTTCC	540
TTCTATCAGG	ATGGGAAGG	AAAAGTGCA	GGCGTTTACC	ATCTAGCTCA	AGGAGTCAAG	600
ACAGTTTAC	CGAGAGAACC	GTTTGTCTCT	GCAGCCTATA	TTGAGCAATT	GGTGGATAAG	660
GAAGTCCAGT	GGGAGATTGA	CTTGGTTCAA	ATCAGAGGAG	ATGGCTCTAA	ACCAGAAGAC	720
TATGAAGCCA	TTGCTGCTT	GGACTATGCA	AAATTCTTAG	AGGTATTACC	CCCATCTTTT	780
TACCACCAAC	TAGAGCCCAA	TCAATAGAA	GTGCAACCCA	TATTAGACAA	AGATTTTAAA	840
ACATTAGCAC	AGAAAAAGTA	AAGCAGAAGC	AGGTCAATCG	ACTTGCCTTT	TTGACATAGA	900
AAAAATCCTG	CCAAGATGAC	AGGATTGCTA	CTCAATGAAA	ATCAAAGAGC	AAACTAGGAA	960
GCTAGCGCA	GCTGTACTTG	AGTACGGTAA	GGCGAAGCTG	ACGTGGTTTG	AATTTGATTT	1020
TTGAAGAGTA	TGAAGTTTAA	AGAAAAAGCA	AGATACGAAG	AT		1062

(2) INFORMATION FOR SEQ ID NO: 198:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5846 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

TATCTACAAC	CTCAAAAACA	TGTTTTGawG	gCTCGTCAGT	CTATCTACAA	CCTCAAAAAC	60
ATGTTTTTaa	kGCTcGTcAG	LTCTATCTAC	AACCTCAAAA	ACATGTTTTG	AcaGCeTcGT	120
CAGTCTATC	TACAACCTCA	AAAACATGTT	TTGAGCTGAC	TTCGTATGTT	TCATCTACAA	180
CCTCAAAAAC	ATGTTTTGAG	CTGACTTCGT	TAGTTTCATC	TACAACCTCA	AAAACATGTT	240
TTGangnCnT	CGTCAGTTCT	ATCTGCAACC	TCAAAAGCAT	GCTTTgagcG	CPTCGTCAGT	300



1170	
TCTATCTACA ACCTCAAAAC AGTGTGTTGC GCAGCCTTTA ATCAGCCGCC TAGTCCGCTC	360
TATGGTATTC ATTAAGTCAA CATCTCTTGT TTAAGAGCAC CAAATCAGGA AATCTTCTCG	420
ATTCCCTGAT TTTTCTTATT TACGTTTTCG TGTGAGCTA CGTCTCTGCA AACCATGAGG	480
TAAGAGAACT TCACGTCTTT CCAACTCTTC CTTATGCATA ATCTTGGTCA ACATACGCAT	540
ACTAATGCGA CCAAGGTCAT AAGAGGTTTG GGCATCGTT GTCAAGTTTG GACGGGTAAA	600
GGGTGAGATT TGTGAATCAT CACTAGTAAT AATTTCAAAA TCTTCTGGCA CAGAAACACC	660
CTTATCAGCC AAACGCTTCA AGACTCCTGC TGCCAACTCA TCACCTGTCA CAACTGCTGC	720
AGTGTGCAATT GATGAATCA AACGCTCTGC TAAGCGGTAA CCATCATCAT AGCTATATTT	780
AGATTCAAA ACCAAACCCCT CACTATAAGT GATTCTCTGT TTTTCAAGG TTTTCTTGTA	840
GCCAACTAAA CGAACCTTAC CATTGATGTC ATCCACTAGC GGACCGCTAA CGAAAGCAAT	900
ACGCTCAATT TCTTTAGCAA GGTAACTCAC TGCATCAATT GTTGCTTGCT TATAGTCAAT	960
ATTGACACTT GGCAACTGGT GCTCAACATC GACAGTCTCT GCGAGAACAA TCGAGGTACG	1020
TGAACGCGAA AATTCTGAGC GAATTTTATC TGTCAAGTGA TACCCCATAT AGATAATGCC	1080
ATCTACCTGC TTGAAAAGA GGGTATTGAC AACAGAACT TCTTCTGCT TATCTTCATC	1140
GCTATTGACT AGGACAATAT TGTACTTGTA CATTTCTGCA ATATCATCAA TCCCCTTAGC	1200
CAAACCTGAA AATAAACCAT TGGTAATATT TGGAAATCAG ACACCGACAG TGGTTGTCTT	1260
TTTACTTGCA AGACCAAGCG CAATGCAATT TGGACATAA TCCAAACGAT CAATTACCTC	1320
TAGCACTTTT TTACGGGTAT TCTCTTTTAC ATTTTTATTG CCATTGACCA CACGGCTGAC	1380
CGTCGCCATG GAAACACCTG CTTACGAGC GACATCATAA ATGGTTACTG TATCATCTGT	1440
ATTCAATTCCT TTTCTGTCTC TTTCTATCTC ACACATTCTT TTACAAGTAG AGTACTGTAT	1500
TGAAGCTCTA TATCTACTTA CAAAAGTGAA GATGTGAAAA TTTGTTTTTC ATATTTCTAC	1560
TTATTCCATT CTATCACTAA TTGTAAACAC TTCAAGTGT TTTTGAAGA TTGATTGAAA	1620
AAATTTCATA GAAAACCTAG GTTTAGCTCC TTGCTACCAC CTTAGACTAA ACAAAAGGA	1680
GGAAACTAAG CCGTCTTAAA GTTATAGTAA AATGAAATAA GAACAGATA AATGCTACAG	1740
GACAGTCAAA TCGATTTCTA ACAATGTTT AGAAGTAGAG GTGTACTATT CTAGTTTCAA	1800
TCTACTATAG GTATTGTCTC ATTCACCTACC GTCAATTTTA GCACATAGTC TTCATGAAA	1860
TATTATATCA TCATAACCAA CCAGATTCTT TCCGATATT AGCTGCCTCT GTTCGATTAC	1920
CTGCACTAG TTTGGAAGA ATATTGGTGA CATAGTTTCG GACTGPTCCG TTGGATAGAT	1980
AAAGTTTGTC TGCAATTTCT TGGTTAGAGA AGCCCTGAGC AATTCCCTTT AAAACTGCGA	2040
TTTCTTGCTC CGTTAATGGA TTGGGATGCA TCATCACACC TTCAATCAAT TCAGGCGAAT	2100

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ACTCCTTCGG	TCCTTCGAGG	ACGGTGTGCA	AGGTTTGCAT	GAGGTTCGCA	ATGTTTCTTT	2160
CTTTTAATAC	ATAAGCATCT	ACTCCAGCCT	TGACCGCAGC	TTCAAAATAC	CCAGGACGCT	2220
TGAAGGTCGT	CACCACAACC	ACCTTTGTCT	CAAGCTTTTC	TGCTCGTATC	CACTCCAAGA	2280
CTTCAAGACC	TGCTCTAACA	GGCATTCTTA	CGTCAAGGAT	GGCGATATCT	ACAGACTCCT	2340
TTTCTAATAG	TTGGATTGCT	TCTTGCCCAT	TCTTGGCTTG	AAAGACAGAC	TCTACATCCG	2400
GTTGAAGCAT	GAGCAACTGG	CACATGGCAT	CTCGCAACAT	ACTTTGATCT	TCTGCGACTA	2460
ATACTTTTCAT	CTACTTTCTC	TCCTTATAAA	GTAGTCGAAC	CTGCACCTCA	GTGGAATGTT	2520
TCTGACTGAT	TACACTTACT	TCTCTTGAAA	ATGGAAAAAC	ACGATTTCCG	ACTGTATGCA	2580
GCTCATCCCC	GCTTATAGAG	GCAAAGCCAC	AGCCATCATC	TCTCACTGTT	AGAAATGAGTT	2640
CTTCTCTGT	CCGTTCTAAT	TTCAAGTAGA	CTTTAGACGC	TTTAGCATGT	TTGATGATAT	2700
TGGTCACTAA	TTCAAGCAAA	ATCATGGAAG	CCGTTGACTC	CAATTCCTGA	GTTAAGCTAG	2760
ACTTGTCCAA	GTGATTTCTCA	ACTTGAACCT	CAATTCGAGC	AAATTCCTAAC	ATCTTTTCTCA	2820
CAGTCTCTAG	TTCCGATGTC	AAAGTTCTAG	ACTTAAGAT	TTCCACAATG	GTTCCGACTT	2880
CATTCATGGA	TCTTTCGTCA	TCTGGTGAAT	TTCTTTTAA	TCCTTTTCCA	CCGTGGGATA	2940
AGCCTCCATC	TGAATAAAT	GCAAGGCTAA	ATCTGTCTTG	ACACTCAGCA	TAGCAAAAGT	3000
ATGTCCGAGA	CTATCATGCA	AATCCTGACC	GATACGACTA	CGTTCAATTT	CAGCAAGCAA	3060
TAGATTTATC	TGAGCATTTT	GCTTGACCTG	AGCTTCTTTC	AAATCCTCGA	CAATACGAAT	3120
CCGAACCAAT	CCAAAAGTCA	TTAAATCGAC	AAAAGTAAGA	ATTACAAGTA	GATGAATAG	3180
AJACTCAACT	TGGATTCTCT	GAAAAATCAA	CAGTTGCCCC	ACAACAAGGA	CTTGAGCAAG	3240
AAGAAAAGTC	CAGACATGTA	AAGACTTTAA	ACTACGTACG	CTGAAATGAT	AACTTAAGAG	3300
ATTGGATAGG	AAAAAGAAAA	ACCAGATATA	ATTAAACAGCA	ACAAAGGCAG	TATTTCCCAA	3360
TACATAAGTC	AGCATGAGGC	CCCAATATAG	CCAAGATAGG	CGCTGGCTCT	TAGTTGTATA	3420
AACACCCAAA	TATGCCACTA	CAAAATAGAT	ATCAATCAAT	AAATGCCAGG	CAGAAAGCCA	3480
CCCAGTCACT	ACAGACAGGA	TGGGAAAAAT	CATAAAAAAT	AAACTGATCC	AAACATATATA	3540
ATGTATTCTT	TTCAGTCTTT	CAAGCATTA	GCATCTCTCT	TATGACCTTG	AAAGTAAATG	3600
GTCAACCAAA	ACAAAACATC	TGAAAAAACA	AGTAAATAAA	CTGTGGCTGA	TAGATTGATG	3660
CCACCCCTCAT	TTAAGAAAGT	CTTGAGCAAC	TCATCAACT	GATAGGTCGG	GAGACACTTA	3720
CCTACTACTT	GCATCCAGTC	TGGAAATAAA	GAGATAGGCA	TCCAGAGTCC	ACCTAAAAACA	3780
GCCAACCCCTA	GATAAAGGAG	ATTGCCCAAG	ACAGACATCA	ACTGACTAGT	TGGTAAGAGA	3840

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GTCAAGGTCA	AACCAAGCGC	TACGAAGGCA	ATACTTCCTA	CTATCAGCAA	AGTGCAGCC	3900
CCAATCCAAT	TTCCAAGAGA	CATGTCCAAC	CCTCTTTACAA	AATGCCCAAC	TGAGAAAACC	3960
ACCAAGATCG	AAACCAATA	ATCAACCAGC	ATACTTGTTA	TCTTTGTAGAT	ATAATATTCT	4020
ACCATATTTA	CAGGCGTATG	ACGCAATGTT	TCTTGCCAGT	TGTTGATCTT	GTCCGGTATGT	4080
AAACAACACTG	GGAATGAGAA	GATAGCTGTT	GACATCATGG	AAAAATGCAGT	CATGGAGATA	4140
AGATAATCAC	GCATAAAATT	CGCGAGTTCA	CCTGGTGTGT	CCTGATAGAT	ACCAGAAAAA	4200
AATAAATAGA	AAGCCGTCGG	CATCCCTACT	GACAATAGAT	AATAGATCAA	TTTCTCGTTTG	4260
GTCAATAAAA	ATTCTATCTT	ACTAAGTGCT	AGCCATCGTT	TCATCTTAGT	TATCTCCCTT	4320
CTGCGTTTCT	TCAAAGATTG	TATCCAACAA	ACTACGATTA	TTAACTTCAA	TTTCTGTGAT	4380
GCCACATCCT	GCTTGAACTA	ACAGTTCCCA	AAAAGCATCT	GCTTCGCGTG	TGACTACTTG	4440
TAGAGCATCC	TGTTTTTTTG	ACCAGTTTTT	AACCAAGTTA	GACTGCTCAA	TGACTTCCCTT	4500
GTATGCCAGA	GGAAGGATAA	AATGCTTTTC	AATTCCTCTA	CTACGCATAG	CTAGAGCGCT	4560
CGTATCACGA	ATCAACTCTC	CCTTATTATA	AACCAAAATC	CGGTACGCGC	TATGCTCTAC	4620
CTCTTCAATA	TAAATGAGAG	AATAGAGAAAT	CGTGACTCCT	TGCGCTTTTTA	GGTCCCGAAC	4680
GATTTCCEAA	AAGCGTTGAC	GAGTTGAAGT	ATCCATGGCA	GCAGTTGGTT	CATCTAAAAA	4740
GACAAGCTTT	GGTCGCCCAA	TCAAGGTCAA	GACAAAAGAG	AAGAGACGCT	TTTTCGCGCC	4800
TGACAATTTT	TCTGCGAATT	GCTCTTTTTG	TGTGCTGTCA	AACTGCAATA	GTGATCGAT	4860
TTCTTGATCG	CTCAAGGAAT	TTGGATAGAT	ACGTTGAAG	AAAGCAATCA	ACTCTTTGAC	4920
CTTTAAATTC	TGAACGATGA	CATTTTCTTG	AGGCAGATAA	CCTCTAATAT	AGTCTAACTG	4980
AGAACTCGTC	ACTGACAAGC	CTTGGATGGA	TACTTGACCG	CTTGTGACCA	GTTTATCTCC	5040
AAGCAGACAG	TCCAAGAGTG	TGGTCTTCCC	AGCACCATTG	GGCCCAATCA	AGGCAGACGA	5100
TTCACTTTCA	GCTACCTCAA	AGGAAATACC	CTTCAAAAAT	GCCTTGCCCT	TGATGTTTTT	5160
ATTTAGGCTT	TCTACTTTAA	TCATATTTCAT	GATATTCTCC	TTTCAACCAC	TCCATTTCTA	5220
TAAGGAAAAAC	GACGAAAAAT	ATAAATCCAA	ACCCCAAAGC	ACCACGAATG	AATTTGGCGAA	5280
gCAAGGTTTG	GTCAAAACAA	CCTGTAAACA	TTTCCACTAA	CCATACAAG	AGTGACAGGC	5340
CGATAAAGAA	ATAGATGATC	CCTCTCTTCA	TTCTCTAAGC	TCCTTTTTCA	CATCTCCGAC	5400
TAATTTTCAA	CCTTCTCTAA	CAAGCCAAGA	CATCATTTCA	AAGCCAGCAA	AGAGCTCCCA	5460
AGGAAAAATGA	TAGAAACTCT	CATCCAATCC	CGAAAAATG	AGTTAGGTCA	TAACCTCTGC	5520
TACTACTATA	CTCACTGCGA	TAATCATTTT	ATTTCTCATC	TCTTCTTCTC	CCAAATTTCTA	5580
CTACAATAT	AGTCTTTTTGA	AATCAGAGGA	GACAGAAGCT	TCTGTCACTA	GAAAAATAGA	5640

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CAAAATGTCAT	AAAAAATCT	GTTCAAAACA	AGCAAGATAC	ACTATACAAT	AAAACACAAT	5700
TAGAAAAATC	TAAGGCAACT	TCCTCAAAG	AGATATCAAA	CCCAATTAC	ACCATAATGT	5760
AAACTAATAC	TTATTTAAAA	TCAAAAAGAG	TAGAAATTTT	TATCAGACAA	ACACATATAT	5820
AGTGATTGA	ATCTATAACA	GTAGGCCTTA	AATACTAAAA	TATTTCTATA	AATTAATTTA	5880
ACTTTCTGA	TAGAGCTGT	CATATCTTAT	TTCAATTCTC	TAAATTATAC	GTTGAACAAA	5940
ACCCCTCTAT	TTCTTTCTTA	AAGATTATTA	AGAGTTATAA	AATCTGTAA	ATTTCAATGT	6000
GTATACCTAA	ACTACGGTAT	TTATTGAAAA	GACTGGAGAC	AAAAAGTATA	CGCTGCCAAA	6060
ATGAATTACT	GAATACTAAA	AAAGAGAGAA	CCAACTGAT	TCCCCTCTAA	TGTATATAAT	6120
ATCTAGTTTT	AAAAATACAC	ACTCACAAT	CTCTGTAATG	AATCGGGAAG	ACAGGATTCG	6180
AACCTGCGAC	ACCTTGGTCC	CAAAACCAAG	ACTCTACCAA	GCTGAGCTAC	TTCCCGAGTT	6240
AAATAGAAAA	ATGCACCTTA	GAGGAGTCGA	ACCTCTAACC	GCCTGATTCT	TAGTCAGGTA	6300
CTCTATCCAG	TTGAGCTAAG	GCTGCTCCAT	ATTATGCCGA	GGACCGGAAT	CGAACCGGTA	6360
CGATCGTTAC	CAATCGCAG	ATTTTAAGTC	CTGTGCGTCT	GCCAGTCCG	CCACCCCGGC	6420
CTCTCTAAGC	GAACGACGG	ATTCGAACCC	GGGACCCCCA	CCTTGGCAAG	GTGGTGTCT	6480
ACCACTGAAC	TACGTTCCGA	CTGTTTTCTT	CTATCTAAAA	ATGCGGCTTA	CATGACTTGA	6540
ACACGCGACC	CTCTGATTAC	AAATCAGATG	CTCTACCAAC	TGAGCTAAGC	CGGCTCATTT	6600
GTTATATCTT	AATGCGGGTT	AAGGGACTTG	AACCCCAACG	CCGTTAAGCG	CCAGATCTTA	6660
AATCTGGTGC	GTCGCGCAAT	TCCGCCAAAC	CCGCATATAT	GACCCGTACT	GGGCTCGAAC	6720
CAGTGACCCA	TTGATTAAAA	GTCATTTGCT	CTACCAACTG	AGCTAACGAG	TCTAAAAATA	6780
CTTGCGTTAC	CTTAACCGGT	CCCGACGGGA	ATCGAACCGG	CGATCTCGCC	GTGACAAGGC	6840
GACGTG						6845

## (2) INFORMATION FOR SEQ ID NO: 199:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2911 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

GAATTCATTT	TAAATTAAGA	TACGGGAGAG	GTAAGTGAAT	TAAACCTCA	TAGGTTAACT	60
GTGACCATTC	AAAAATGAAA	AGAAATGAGT	TCAACGATAG	TGTCGGAAGA	AGATTTTATT	120

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TTACCTGTTT ATAAGGGTGA ATTAGAAAA GGATACCAAT TTGATGGTGG GGAAATTTCT	180
GGTTTCGAAG GTAAAAAAGA CGCTGGCTAT GTTATTAAATC TATCAAAAGA TACCTTTATA	240
AAACCTGTAT TCAAGAAAT AGAGGAGAAA AAGGAGGAAG AAAATAACC TACTTTTGAT	300
GTATCGAAAA AGAAAGATAA CCCACAAGTA AACCATAGTC AATTAAATGA AAGTCACAGA	360
AAAGAGGATT TACAAAGAGA AGAGCATTC AAAAAATCTG ATTCAACTAA GGATGTTACA	420
GCTACAGTTC TTGATAAAAA CAATATCAGT AGTAAATCAA CTACTAACAA TCCTAATAAG	480
TTGCCAAAAA CTGGACAGC AAGCGGAGCC CAGACACTAT TAGCTGCCGG AATAATGTTT	540
ATAGTAGGAA TTTTCTTGG ATTGAAGAAA AAAAATCAAG ATTAAGATAA AAGCTATAGA	600
AAAAAATGGT TTATGTACTG AGATTAGATA GTGAGGTGAT GACATAGTTT TGTGAAAATA	660
GCCATTATATA ACTCAATTAT TTAGTTTACT TTACTTTACT AGTGATACTA TTTGAGTTA	720
TTAATGGACT TAGTTTATAT AACTAATGAA TTGATTGAAA GGGTTAGTAT TGACAATATT	780
GGTCATATTG ACTAGAAAT AGACTCTATC AAATTTTAAA GGCTAATAGA GTGTATGAGA	840
CAATTTCCGG TCTTTGCAA CTGTAGTGGG TTGAAGTCAG CTAAGCTCGA GAAAGGACAA	900
ATTTTGTCTT TCTTTTTTG ATATTCAGAG CGATAAAAAAT CCGTTTTTTG AAGTTTTCAA	960
AGTTTCCAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT GAGATTATTG GTCGCTTCCA	1020
GTTTGGCATT AGAATAGTGT AGTTGAAGG CATTGACAAT CTTCTCTTTA TCTTTGAGGA	1080
AGGTTTTAGA GGATGAACCT GATTCAAGT GTCTCAATG AGTCCGAAAA ATTTGTCAGG	1140
CTCCTTATTC TGAAAGTGAA AAAGCAAGAG TTGATAGAGA TTATAGTGGT GTTTCAGATC	1200
TTCTGAATAG CTCAAAGTT TATCTATAGT AGATTGAAAC TAGAATAGTA CACCTCTGCT	1260
TCTAAACAT TGTTAGAAT CGATTGACT GTCTGAATG ATTTGCTCTG TTATTATTTC	1320
ATTTTACTAT AAATCCACGT TTAGCAATCT CTTTCCACAC TTGTTCAATG GGGTTCATCT	1380
CTGCTGTGTA TGGAGGAATA AATGCAAAAC CAATATTAGT CGGAATCTTT AAGGTACTTG	1440
ATTTATGCCA TATAGCATTG TCCATAACGA GTAAAAATA ATCATCTGGA TAAGCTTGTG	1500
AAAGCTCCTA TTCTPAAAGC CCCTTTATAA CCTCTTGGGA GAGAGCATAT TGACTCAGCC	1560
CTTACTTTCAT GCGGATGAAA CTCTCTATCG GGTTCATAGG AGTCATAGCC ATCTGACCTA	1620
CTATTGAGCC TTTTGTCTG GGAAAGTTGA GAATCAAGCA ATCACGCTGT ACCATCATGA	1680
TCAGAGTCGG AGTGGTTCGG TAGTACAAGA ATTCTAGGA GATTATCTCT GCTATGTTCA	1740
TTGTGATATG TTGCGCAGT AACTTAGGAC TTTAGTCTCT TAGTTCCTGC TATGCGATAG	1800
CAGTCCAAAG TTTAGGAGCA AGGCGAGCT AAGCTTGCTA AACTGCGAAC CGCTAGAAAC	1860
TTATGTCFAA CTGGAAGAAG CTGAACCTGT TGGATGTTGG GCGCATGTGA GAAGGAAATT	1920

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TTTGAAGCG ACUCCCAAGC AAGCAGATAA ATCATCTTA GGAGCTAAG GTTtagCTTA	1980
TTCTGATCAG TTATTTTCCT TGGAAAKAGA CTGGGAGGCT TTGCCAGCTG ATGAACGACT	2040
ACAGAAACGT CAAGAACATC TCCAGCCCCT AATGGAAGAC TTCTTTGCTT GGTGCCGCCG	2100
TCAGTCAGTT TTAGCAGGTT CAJAACTAGG AAGGCAATT GAATACAGCC TCAAGTATGA	2160
AGAAACCTTT AAGACTATTT TGAAGAGCG ACATCTGGTC CTITCCAATA ATCTAGCTGA	2220
ACGCCCATTT AAATCATTTG TTATGGGAGC GAGTAAAGA GTCCAGTGA CTCTTTTAGC	2280
CTGAGCTCAG TTTAAAAAG CGAGGGTGGT TMTTTTCTCA AAGTTTTGAA GGAGCTAAG	2340
CAAGAGCTAT TGTATGAGC TTGTTGAAA CAGCTAAACG TCATCAATTA TAGTGCCTTG	2400
AATCTATAAC AGTACGCATC GACTGCTAAA ACATTTCTAT AAATCAATT TCCTTTCTTA	2460
ATCGATTGT TCATATCTTA TTCAATCCA TTATAAATG CGAGAAATAT CTATCCTATC	2520
TTCTAGAATG TCTTCCAAAC GAGGAACTC TCGTAAACAA AGAGGTTTTA GAGGTTTTAT	2580
TACCATGGAC TAAAGTTGTA CAGAAAAGT GCAAATAAGA AATCTCCAGA TTAGGAACATA	2640
TCCGTGAGTT CACTAATCTG GAGATTTTTC AATAGATTCG TTATTGGGCG GTTACGATAT	2700
GATCACTACT TCGTCAGTCT TATCTACAAC CTCAAAACAG TGTTTTGAGC AACCTGCGAC	2760
TAGCTTCTTA GTTTACTCTT TGATTTTCAT TGAATATTAG AACAGAAAAA ATGCTGGAG	2820
TATTTGTTTG TGTGTTTATT TTTATATAAC AAATATATAA CAAATATAAA ATATAAAAAA	2880
AGAGACAAAA AAGAACAGAA AGTAATTGAC A	2911

(2) INFORMATION FOR SEQ ID NO: 200:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6854 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

GAAATAAGT CTTGACAGAA AGCGCTATCA ATGATAGAT GAATTCAGAT AAAAGATT	60
ATTTTTAAAA CAAAAATGAA ACGTTTCAA AAAGAAATA AAGAGCAGC GCCAGCGCT	120
ATCTTTTCTA GAAAAAATG AAACGTTTCA AAAAAGGAGG TTGCTATGAA TAGCAAGCG	180
AAGCAAGTTT CTCTTTGGGA AAGAATCAAG AAACAAAAAC TCTGTATTAT GATGACTGTC	240
CCCGGTTTAG TTTTAACCTT TATCTTTAAA TACATCCCTA TGTATGGGGT TTTAATCGCA	300
TTTAAAGATT ACAATCCTTT AAAAGGAATT TTAGGAGTGG ATTGGATTGG TTTTCTCTGAG	360

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TTTACAAAAT TCATATCCTC TCCCAACTTT GGTATCTTGT TAGCCAAACAC ATTA AAAA TTA	420	
AGTATCTATG GTTTATGTCT TGGCTTTTTA CCACCAATCA TTCTCGCGAT TATGCTCAAT	480	
CAACTCTTGA GTGAAAAGT CAAAAACGA ATTCAGCTCA TTTTATACGC ACCAAACTTT	540	
ATCTCACTCG TTGTTATGTG CGGTATGATT TTCTCTTCTT TTTCAGTGGG AGGACCAATC	600	
AACAATTTTC TTTCATGTTT TGGAAATGAG GCTGACTTCT TGACAAATCC AGACTTCTTT	660	
AGACCTTATAT ACATCTTTAG TGGTATCTGG CAAGGAATGG GCTGGGCTTC AACGCTCTAC	720	
ACGGCAACAT TGGTAAATGT AGATCCAGCC TTAGTAGAAG CAGCCCGACT GGATGGAGCC	780	
AATATCTTCC AACGAATCG GCACATTGAT ATTCCAGCTC TTAAGCCTAT TATGTTATTC	840	
CAATTTGTTT TAGCTGCAGG TGGAAATATG AATGTGGAT ATGAAAAGC ATTCTTGATG	900	
CAGACATGAT TAAATTTGCC AACTTCTGAA ATTATCTCGA CATATGTCTA TAAAGTTGGT	960	
CTTGATCAG GAGACTATTC TTAACACACA CGCGTTGGTT TGTTTAATGC AGTGATTAAC	1020	
GTAGTATTGC TTGTTGCAGT TAACCAATC GTTAAACGA TGAATAATGG TGAAGGAATT	1080	
TAAGGAGGAA AGTATGAAAA ATTCAATTAT GGATACAAAA TTGTATAGAC GTATCTTACT	1140	
CTTAAATAAA ATCAATTATG TCTTTATCGT TTGTATGACT TTGCTTCTCT TACTTTATAT	1200	
CGTGTAGCA TCCTTATGG ATCCTAAGGT TCTGGTGGT AGAGGGATTA GCTTTAATCC	1260	
AGCCGATTGG ACTGTAGAAG GTTACCAGCG TGTATTCAGT GACCAATCTA TTCTAAGAGG	1320	
TTTATCAAT TCCTACTAT ACTCTTTTGG ATTTGCAGCT TTAACAGTCT TGCTATCTGT	1380	
GTTTACAGCT TATCTCTTTT CTAAGAAAGA CTTGGTTGGA CGTCGTGGA TTAACACTTT	1440	
CTTGATTGTA ACTATGTCTT TTGGTGGTGG TTTAGTCCCA ACTTACTTGC TCGTAAAAGA	1500	
ATTGGGAATG CTCAACTACT CATGGGCTAT CATTTGTCCA GGTGCTGTTA ACGTTTGGAA	1560	
TATTTATCTT GCTAGGGCCT ATTTCCAAGG ATTGCTTGAA GAATTAGTTG AAGCTGCTGT	1620	
CATTGATGGT GCAAAATGAT TACAGATTTT CTTCAAAATC ATGCTTCTCT TTGCAAAACC	1680	
AATTATGTTT GTTCTCTTCC TTATATGCTT TGTAGGACAG TGGAACTCAT ACTTTGATGC	1740	
AATGATTAT ATCAAGGATC CAAACTTGGA ACCATTGCAA CTTGTACTTC GTAAAAATCT	1800	
CATTCAGAGC CAACCAAGTC AAGACATGAT TGGAGCACAA CGCGCTATGA ATGAATGAA	1860	
ACGTTTAGTA GAATTGATTA AATACGCAAC TATTGTCAAT TCCAGCTTGC CATTTAGTTG	1920	
TATGTATCCA TTCTTCCAAA AATACTTTGA TAAAGGAATT ATGGCTGGTT CACTTAAAGG	1980	
ATAAAAAAAG AAAAAATAA AGCAGTTTTT TCAATGAAAT CAAAACATTC TCAAAATCAG	2040	
CAGTTTTGTT GACAGTAGT TTAGCAGTAC TTGCAGCCTG TGGCTCAAAA AATACAGCTT	2100	
CAAGTCCAGA TTATAAGTTG GAAGGTGTAA CATTTCCGCT TCAAGAAAAG AAAACATTGA	2160	

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AGTTTATGAC AGCCAGTTCA CCGTTATCTC CTAAGAGACC	AAATGAAAAG TTAATTTTGC	2220
AACGTTTGGG GAAGGAAACT GCGTTTCATA TTGACTGGAC	CAACTACCAA TCCGACTTTG	2280
CAGAAAAACG TAACTTGGAT ATTTCTAGTG GTGATTTACC	AGATGCTATC CACAACGACG	2340
GAGCTTCAGA TGTGACCTTG ATGAACGGG CTAAGAAAGG	TGTTATTTAT CCAGTTGAAG	2400
ATTTGATTGA TAAATACATG CCMAATCTTA AGAAAATTTT	GGATGAGAAA CCAGAGTACA	2460
AGGCCTTGAT GACAGCACCT GATGGGCACA TTTACTCATT	TCCATGGATT GAAGAGCTTG	2520
GAGATGGTAA AGAGTCTATT CACAGTGTC ACGATATGGC	TGGATTAAAC AAAGATTGGC	2580
TTAAGAAACT TGGTCTTGAA ATGCCAAAA CTAAGCTGTA	TGTGATTAAA GTCCPAGAAG	2640
CTTTCAAAA CGGGGATCCA AATGGAAATG GAGAGGCTGA	TGAAATTCCA TTTTCATTTA	2700
TTAGTGGTAA CGGAAACGAA GATTTTAAAT TCCTATTTCG	TGCATTGGT ATAGGGGATA	2760
ACGATGATCA TTTAGTAGTA GSAATGATG GCAAACTTGA	CTTCACAGCA GATAACGATA	2820
ACTATAAAGA AGGTGTCAAA TTTATCOGTC AATTGCAAGA	AAAAGGCCTG ATTGATTAAG	2880
AAGCTTTTGA ACATGATTGG AATAGTTACA TTGCTAAAGG	TCATGATCAG AAATTGGTG	2940
TTTACTTTAC ATGGGATAAG AATAATGTTA CTGGAAGTAA	CGAAAGTTAT GATGTTTTAC	3000
CAGTACTTGC TGGACCAAGT GGTCAAAAA CAGTAGCTCG	TACAAACGGT ATGGGATTTG	3060
CACGTGACAA GATGGTTATT ACCAGTGTA AAAAAACCT	AGAAATTGACA GCTAAATGGA	3120
TTGATGCACA ATACGCTCCA CTCGAATCTG TGCAAAATAA	CTGGGAACT TACGGAGATG	3180
ACAAACAA CAACATCTTT GAATTGGATC AAGCGTCAAA	TAGTCTAAA CACTTACCAC	3240
TAAACGGAAC TGCAACAGCA GAACCTCGTC AAAAGACTGA	AGTAGGAGGA CCACCTAGCTA	3300
TCCTAGATTC ATACTATGGT AAAGTAACAA CCATGCGCTGA	TGATGCCAAA TGGCGTTTG	3360
ATCTTATCAA AGAATATTAT GTTCTTACA TGAGCAATGT	CAATACTAT CCAAGAGTCT	3420
TTATGACACA GGAAGATTTG GACAAGATTG CCATATCGA	AGCAGATATG AATGACTATA	3480
TCTACGTAA ACCTGCTGAA TGGATTGTAA ATGGCAATAT	TGATCTGAG TGGGATGATT	3540
ACAAGAAAGA ACTTGAAAA TACGGACTTT CTGATTACCT	CGCTATTAAA CAAAAATACT	3600
ACGACCAATA CCAAGCAAC AAAAAGTAGA GGTGATTAT	GGGAGATAAG AAATACACAG	3660
TAGAAAAAGC CAATCGTTT ATAGCAGAAA ATAAACATCT	CGTTAATACT CAATATAAGC	3720
CTGAAGAACA TTTTTCAGCT GAGATTGGTT GGATCAATGA	TOCAATGGA TTTGCTATAT	3780
TTCTGGGAGA AFACCATCTC TTTTATCAAT TCTATCCATA	TGATAGTGTT TGGGGCCCTA	3840
TGCCTGGG ACATGCTAAA AGTAAGGACT TGGTGACTTG	GGAGCACCTG CCAGTGGCAC	3900



1178

TTGCTCCTGA CCAAGATTAT GACCGAAATG GTTGTCTTC AGGCTCTGCC ATTGTCAAGG	3960
ATGATCGCCT CTGGCTCATG TACACTGGAC ATATCGAAGA AGAAACCGGT GTCGCGCAAG	4020
TGCAAAATAT GGTATTTTCA GATGACGGGA TTCACCTTGA AAAGATTTC CAAAATCCAG	4080
TTGCAACTGG ATCAGACTTA CCAGATGAGT TGAATTGCTGC TGATTTCCGT GATCCAAAAC	4140
TCTTTGAAAA AGATGGACGC TATTACTCCG TAGTAGCTGC CAAACACAAG GATAATGTGG	4200
GCTGTATGCT TCTACTAGGG TCCGATAACC TAGTAGAATG GCAGTTTCGAA TCCATCTTTT	4260
TAAAGGGGG AGAACACCAA GGTTTTATGT GGGAAATGCC AGATTACTTC GAGTTAGATG	4320
GGAAAGATTG CCTTATTATG TCACCCATGC GTTATCAGCG TGAGGGAGAC TCATATCATA	4380
ACATCAACTC ATCGCTTTTG TTCACGGGTA AGTAGATG GAGAGAAAA CGTTTATACC	4440
CAGAATCAGT TCAAGAAAT GATCATGGCC AAGACTTCTA TCGCGCTCAA ACATTGTTGG	4500
ACGATCAAAA TCGTCGTATC CTGATTGCTT GGATGCAGAC ATCGGGGCGT ACCCTTCCAA	4560
CCCATGACCA AGAACACAAG TGGGCATGTG CCATGACTCT ACCTAGAATT CTAAGATTGG	4620
AAGATGGCAA ACTAAGACAA TTCCCTGTGA AAAAAGGCCA ATATCAAATC CAAATAGATA	4680
AAGATTGTCA TTACCACTTA GGAAATGATA TAGATTATCT TGAATTGGT TATGACAGTA	4740
ATCGCGACGA AGTTTACATT GATCGTAGCC ATCTTAFTCA AAAAATCTA GGTGAAGAAG	4800
AACAGGACAC TAGTCGACGG TATGTAGATA TTGAAGCTAA AGAATTGGAA GTTGTTCTAG	4860
ATAAAAAATC CATCGAGATT TTTGTCAATC AAGGTGAAGC AAGCTTGACT GCAACTTATT	4920
ACTTAACCGT GCCAGCTGAG CTATCACGAA TTGATFAAAA ATTAAGTTAT TTCTCCTAAA	4980
GAAAAAGTTC TCITTTCTAA ATAGTGGAAA GAGGACTTTT TGTGTTTGG GTATATAAGC	5040
TTAGTTTATG GTATTGTGAA AATTGTGTT GGATTATGAT TTAAGCTAGT TTTCTAAGAA	5100
ATTTGAAAAA AATTTTATTT AAGCAAAAAA ACCTTGCTTC CAAGGCTTTT CCGTTGTAT	5160
TTAGATGCCC CCTACAGGGA TTGTAGGAGA TATGTTGCTT AGATGTTCTT GATTTCTGG	5220
TGTTTGTGAA CGTTTAAATG AGTTTTTGA GTTTGTTGOT GGGGCGTTGC CCGCAATTG	5280
CCGACTTAT TGCTTGAAA AGAATTTAAA ATATAGTATA GTTAATTATA GATTAACT	5340
TGCTTGGAGG AACTGATGAA GAACAATGAA AGATTAGTA TTAATTAAG TAGAGATAGC	5400
GTTTTAGAT TAGGGGAAGT TAGAAGCTT TATTTAGGCA GTTCAGATAT CCCAGTTCT	5460
GATGGCTATG TGATTGAAT TGCTTATAAC CAGATATCAC ATGAGATTGA TATTTATTGAT	5520
TGGGTAGAGT TGAACAAGTC AAAAATTAAG ATAAGTGAAA TTAGTGAAAG CGTGGATATA	5580
GATGCCACTA GCTTGAGAAC AACTTTGACT TTAGACACAT TAGTATATGA AGGTATGAGA	5640
GATATACAGT TAAAGTTGAG AGAGCTTACA AAGGGGAGAG TATTCTTTTC ATTTGTAGTG	5700

1179

AAGTTAGTTT TGTTCCTTC TATTTAAAG AAAAAGATT TACTAGAAA ATTTCAAGAA 5760  
 AAGTCTTAAT CAAGTATTGA CACTTTATCT GGATTTCGGT ATAATATGCT TAGAAAGGAA 5820  
 TCTTCTTAA TTTTTTTCGT CTTATGTGT TAATCAAGA CGAATACAAA AACATATTTT 5880  
 TTTACTCTAA AAGTGTTAA TCAATGATGT ATTTGTAGA GAGGTAGATA AATGGAATTG 5940  
 AGAGCACCAC CAGTTATAAT AGTATAAAC GTATAATAA AATATTTTAA CTGAATTAT 6000  
 AGAAAGGAG AAACAATCA TGAACAAAA ACAACCGATT GTTCTAGAA CGAAACAACA 6060  
 TACATTTGAA GAGCTTATTC AAGACCAAAA GTTAGAAGA TTGGCTAAGT TGTGCCCGA 6120  
 TTTGGTTGA AGGTATGTT TTACTGCTAG CTGTGCTCT TCATTTCGA ACTTGATTAA 6180  
 AGAAGCGTAT GGGGGTAAAA ATCTAAACGT AGTTTATGCG AGTCGGATGT TGGCTCTCTG 6240  
 GAATATTGCT TGCAGTTGTT ATCATAAGGC TGATGGTAT TCTTTAGCAG ATGCCGTTTT 6300  
 TAGTGATAAA AAAATTTGTC TAGATTCTTA CTATTACCC AAGAATACCT CTATFACCAT 6360  
 AACTAGTGAT GTGATAAAG ATGTTTACGA TAATTATAAT AATTATATGG TTTTAACTCG 6420  
 AGAAGCGACA CCTGAATACA TTTATGTTGT ACAAACTGAA ATGCCAAAAG ATTCAAGATT 6480  
 ATATTTTAT ATTAGAGAAG TTCTGGGATT ATCGTTTAGT ACCATGCATT ATGCATTTTT 6540  
 AGTCAAGGTT CTTCAGGAG CGCTTGCTAG AAAATATAAG CCATATCGAA ATTGAATTAT 6600  
 TTAAATTAT ACTCTTCGAA AATCAAATC AAACCAAGTC AGCTTCGCCT TGCTGTACTC 6660  
 AAGTGCTGTC TGTGCTAGC TTCTTAGITT GCTTTTGAT TTTCATTGAG TATTACTCTT 6720  
 ATGGTAGTAA TTTATGGCAT AATAATATTG ATTTGGGAGT TATAGCGAAA ATTTTAGGTT 6780  
 CTATAATATT TGTAGTGGGT AAACCACTAT AGATATTATG GAGCCTATTT ATTTAGAGAA 6840  
 AAAGTCCCAT ATGA 6854

(2) INFORMATION FOR SEQ ID NO: 201:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3895 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

TCCTTGCTAA GTTATACTC AATGAAATC AAAGAACAA CTAGGAAGCT AGCCACAGGT 60  
 TGCTCAAGC ACCGGTTTGA GGTTCAGAT AAAACTGACA CGGTTTGAAG AGATTTTCGA 120  
 AGAGTATTAA TTTACATAAA TAGCCAGTGT TTGATAGCT TTAGTAGAA TTTTCTCAGA 180

1180	
CACCTTCGCA TCTTCATAGT TTGATATCAA AATCTGTCCA TTTTGGTAGA CTGCTGGCAA	240
GTCCGATTTCa CTCTTTAGC ATAAAGTGA TTGAGCACTA GTAACTTTTG ATCCTCAAAAC	300
TGGCGTTTCAA AAGCGTAGAC TTGTTTGCTA TCTTCAAAGG CTGGTTTGTA ACTTCCTTCT	360
GAAATGATTG GCATTTCTTT ACGCATCGAA TCAAGTCTTG ATAGAAGGTA AAAATCGGAC	420
CGTGGATTTC ATTTTCTACA TTGATGTATT TATAGGATTT ACCAGCTTTC AACCAAGGAG	480
TGCGTGTGTA AAATCCTGCA TTTTCCGAAG CATCCCACTG CATGGGAATG CGTGAATTAT	540
CACGCGACTT AGCTTGAATA ATCTGGGAAG CTCTTGCTG ACTCTTTCTT TCTTCTAAGA	600
GCATCTGATA GGCATTAAGC GATTTCGACA CCACATAATC AGCCATAGAA TCATAGTCTG	660
GGTCAATCAT CCGATTTCCT TCACCCATGT AGATATAAGG TGTCCCACGT GACAGGTGAA	720
TGCTGGCTGC TAGCATGGTG GCTCCTTCCT TGGCGAAGTT TTGAATATCG ACNAAACGCT	780
TCAAGGCACG TGGTTGATCG TGATTTATCC AAAAGAGGCG ACTCCAACCG TCTTTATCAC	840
TCAATTCTCT ACCCCAACCTA TGGTAAAGAC TCTTCAACTC TTCAAAATCA AAGGGAGCCA	900
AGGTCCACTT TTGTCCATCC TTATAGTCCA CCTTGAGGTG ATGAAAATTA AAGGTTCATGG	960
ATAATTCTCG ACGATCAGGC GACGAATAGA GGACACAGTT TTCCATGGTG GTAGAAGACA	1020
TTTCCCACAC TGTCTAAAG CTATCGTCGG ATCCAAAAGT GGCTTGGTTC ATCATACGCA	1080
AATAGTTATG AACGATGGGT TTGTCTGTAT AAGCTGGCTT CCTTTCATTT TCAGGACAGT	1140
CCACTGAAAC CTCGTCCTTA CCGATCAAAAT TGATCACAAT AAATCGGAAA COTTTGACAC	1200
CCTTGTCTCGC CCAGAAAATTA ACAACCTTGA AAAGCTCCTT ACGGACATTT GAATTGCGCC	1260
AGTTAAGGTC AGCCTGGGTC TCATCAATA GGTGAAGATA GTATTTCCCA GTATCCCGCA	1320
AAGGCGTCCA TGCAGAACCA CCAAACTTAG ACTGCCAATC TGTGGTGGT TCTTGGATGA	1380
AGAAAAAGTC TTGATAATAC TTATCACCAG CTAGGGCTTT CTGAAACCAT TCATGCTCTG	1440
TCGAACAAATG ATTAAGTACC ATGTCCAGCA TAAAGTCAAT CTGTGCTCTT TTACCGACAC	1500
ACACCAATTTT CTCAAAATCA GCCATATCAC CAAAAGAGG ATCCACTGCC ATATAATCTG	1560
AAATATCGTA ACCATTATCC CGTTGAGGGC TTGGATAGAA TGGATTGAGC CAGACCATAT	1620
CCACACCTAG TTTGGCTAAA TAGGGAATTT TTTCGATAAT CCCACGAAA TCCCAATATC	1680
CGTTTTCAGT GGTGTCCTTG TAAGATTTTG GATAGATTTG ATAGACTACT TTTCCTTTAT	1740
CAAGTGTCAAT CTGTTCTCTC TTTTCTGATA AAAGGGAGGA AGCAGTCTTC CGTCCCTATT	1800
TGTGCTATTT CAATTATACT CAATGAAAT CAAAGAACA ACTAGGAAGC TAGCCACAGG	1860
TTGCTCAAAA CACTATTTTG AGGTTCAGA TAGAGCTGAC GTGGTTTGAA GAGATTTTCG	1920
AAGAGTATTA GATTCCTGTA GCGACCATGA GAGATGCTCC AGCTTGGATC GTTGTGCGAT	1980

1181

AAGTTCGGG	AATAGTCGCT	GTATAAGCAT	CTTGTTGGT	GATGATAACA	GGAGTTCTG	2040
TCACCAGACC	TGCAGCCTTA	ATGACATCCA	TATCAAAACG	AATCAGTTGC	TGACCAACTG	2100
TAACGTGATC	TCCTGGACT	ACAGACTTT	CAAAACCTTT	GCATCAAGA	CCTACTGTAT	2160
CCATACCGAT	GPGATGAGC	AATCAACTC	CCTCGTCAGA	GACAATGCCG	ATGGCATGCT	2220
TGGTAGGGAA	AAGAACCTC	ACTGTCCCAT	TAACTGGAGA	GGTCAACTCA	CCTTGGCTTG	2280
GTTCATGAC	TAGACCTTGC	CCATGACAC	CTGATGCAAA	AATAGGATCC	GTGCTTGAC	2340
TCAATCTCTT	CACCTGGCCA	GTAGTGGGC	TGATAMTTTC	TACCGAAGTA	AGTTCTACTG	2400
GTTCATGGTT	CACAAATCT	GCTTCTCTT	GAGCAACGAA	TTCTGCCTGC	AGTTCTGAT	2460
CGCCCTCTGT	TTTTGTAAAG	AGACCAGCT	TGCGAAGAA	GAAATCAAG	AGCATTOGAA	2520
CAACAATCGC	AACTAGCATA	GTTCCTGCNA	ATGGCAGCAT	GTATTGAGGT	TGAATAGAGA	2580
GAATACCTGG	CAAACTACCG	ATACCAATAG	AAGCCGAGT	TACATTAATA	GTAAACGATA	2640
ACATGCCCTGC	AAGGGCTGAA	CCAGTCATCC	CAGCAACAAA	TGGATAAATA	TATTTTACCT	2700
TAACCCCAA	AAGAGCTGGT	TCTGTAAAC	CGAGATAGGC	TGAAATGGTT	GCAGGAAGTG	2760
AAACCTGAGC	CTCAGCTCA	TCATGGCGAT	GCATGAATA	ATAGGCAAA	ACGGCTGAGC	2820
CTTAGAGCAAT	ATTAGAAAGA	GCAATCATTG	GCCATAGGGC	AGTGCCACCA	GCATCCGCAA	2880
TCAATCTGT	ATCAATGGCA	TTGGTCAAT	GGTCAGACC	TGTGATGACA	AATGGAGGT	2940
AGAGGGCGGC	AAAAATTGCA	CCGAAGAGCC	ATTPAATCG	ACCAATTAAA	CCTGCCAAGA	3000
CAACTGATCA	AGTCTCTTGT	CCAATTGTCC	AACCGATTGG	TCCCAAAACA	GTATGAOCCA	3060
AAATCAAGGC	TGGAATCAAT	GACAGAAAG	GTACAAAAAT	CATAGAAATG	ACTTCTGGGA	3120
TATGCTTTGTG	CCAGAAGATT	TCAAGATAAG	ACAGACTCAA	ACCTGCAAGC	AAGGCTGGGA	3180
TAACTTTGGC	TTGGTAACCG	ATACGATTAA	CAGTAAAAAT	GCCAAAATTC	CAAAACCAAT	3240
TTGCCGCGAT	ATCAGCTGCT	GGCGTTGAAG	CAACCGCATA	GGCATTGAGC	AACGAGGCG	3300
ATACAAACA	GATTCCGAGA	ACAAATCCCA	AAATTTGGCT	GGTCCCATC	TTACGAGAAA	3360
CAGACCAAGT	AATCCCTACT	GGTAAGAACT	GGAGATAGC	TTACCAAGGC	AACCAGAGGA	3420
AGTGATTGAC	ACCTGCCCAA	AACGAGAGG	ATCTGTGAT	GGTCTTGCCA	TCCAACATCG	3480
ACCAATGGAC	ACCTTCCAAG	ACATTTACGA	AACCGAGGAT	CAATCTCCG	ACTATCAAGG	3540
CTGGAAATA	COGATAAAA	ATCTCCGCCA	GAGTGGTCA	AACACCTTGG	ACCAAGTTT	3600
GATTACTCTT	AGCTGCAGAC	TTGGCTGCTT	CTTTGGAAC	ACCCCTCAATA	CTTGAAACGG	3660
CTGTAAATC	ATTATAAAG	ATGGGACGCT	CATTTCCAA	GATTACCTCA	AATGACCTG	3720

1182

CATTGTGAAA	GGTTCCTTTA	ACAGCTGGAA	TTGACTGGAT	AGCTTTAACA	TTAGCCTTCT	3780
TATCATCTCC	TAAAAAACA	CGCATCCGTG	TCGCACAGTG	AGTTACGGCA	GTCAATTTT	3840
CTTTGCCCTC	GATTGCCCTG	AGCAGATCTT	TGGCTCTGTG	TTCAATTTT	CCCGG	3895

(2) INFORMATION FOR SEQ ID NO: 202:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3936 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(x:) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

AGGATGCGCG	CTCCAGCTAC	TAAGTCTCGT	GCAGTGCCGA	TTTATCAAAAC	AACATTTTTT	60
GTTTTGTATG	ACACGTAGGA	AGGTGCCGAT	CTGTCTGCTT	TGAGGAAACC	AGGGAACATT	120
TATACTCGTA	TCACCAATCC	TACAACAGCT	GCCCTTGAAG	GTGGTGTGTA	AGCGCTAGCA	180
ACAGCATCAG	GTATGACTGC	AGTGACTTAT	ACGATTTTGG	CGATTGCCCA	TGCTGGTGTAC	240
CATGTAGTGG	CTGCTTCGAC	TATTTACGGT	GGAACTTCA	ATCTTTTGAA	AGAACCCCTT	300
CCTCGTTATG	GTATCAACAAC	AACCTTTTTT	GATATTGATA	ATTTGGAGGA	AGTAGAAGCA	360
GCTATCAAAG	ACAAATACAA	GCTTGTCTTG	ATTGAAACCT	TGGGTAACCC	CTTGATTAAAT	420
ATTCAGACC	TGGAAAAAAT	GGCAGAGATT	GCTCATAAAC	ATCAATATCC	ACTTGTGTCA	480
GACAACTACT	TTGCAACACC	TTATTTGATT	AACGTCTTCT	CTCATGGCGT	TGACATTGCC	540
ATTCACTCTG	TGACTAAGTT	TATCGGTGGG	CATGGTACAA	CTATTGGAGG	AATAATTGTC	600
GATAGTGTGC	GTTTTGACTG	GACGGCTTCA	GGGAAATTCC	CTCAATTTGT	TGACGAGGGT	660
CCAAGCTGCC	ACAAATTTGAG	CTATACTCGT	GATGTGGGTG	CAGCAGCCTT	TATTATAGCT	720
GTTCGAGTTC	AATTGCTTCG	TGATACAGGT	GCAGCCTTGT	CACCATTCAA	TCCTTTCCCTC	780
TTGCTACAAA	GACTTGAJAC	CTCTTCACTT	CGTGTGAAC	GCCATGTACA	AAATGCTGAG	840
ACAATTTGTT	ATTTTCTGTT	CAACCATCTC	AAGTAGAAA	AGGTAANTTA	TCCAAAACCTT	900
GCAGATAGTC	CTTATCATGC	CTTGGCTGAG	AAATACTTGC	CAAAAGGTGT	CGGTTCAATC	960
TTTACCTTTC	ACGTCAAAGG	TGGCGAGGAA	GAGCAACGA	AGGTCAATTGA	TAATTTAGAA	1020
ATCTTTTCTG	ACCTTGCAAA	CGCGGCAGAT	GCTAAATCGC	TTGTGTGCTCA	TCCAGCAACA	1080
ACCACCTCACG	GTCAATTGTC	AGAAAAAGAC	CTAGAAGCAG	CAGGTGTCAAC	ACCAAACTAA	1140
ATTCGTTTGT	CAATCGGTCT	TGAAAATGTA	GAAATTTTGA	TTGAAGACTT	GCGCTTGGCC	1200
TTCCAAAAAA	TTTAAAGTAA	AAGAAGATAA	ACAGTGGGCT	TCGACTCACT	GTTTTTCATT	1260

TTCCCTCAGG CATGATATAA TGGTTACAGA AGTCTAGAAA GAGGAACGAT ATGAACGAAA	1320
TCAAAATGTC CAACGTGGG GAACTCTTTA CAGTAAATGA GAGTCAGTAT GCCGAACCTCT	1380
TGTCCCAAGT GAGAACGGCA GAGTTTGATA AGGAATCACA CGATAGGATG AAGCAGGAAC	1440
TGGCCTTTGGC TGAGCAAAAG GCCATGAATG AGCAACAGAC TAAACTTGGCT CAGAAGGATC	1500
AAGAAATTGC GCAATTACAG AGTCAGATCC AAAACTTTGA TACAGAAAAA GAATTGGCCA	1560
AGAAAGAGGT TGAACAGACA AGCCATGAGG CTCTCTTGGC TAAAGACAAG GAAATCAGC	1620
TCTTAGAAAA TCAGTTGGCT ACCTTGCGTT TGGAGCATGA AATCAACTA CAAAGACCC	1680
TTTCTGACCT AGAAAAAGAA CGGATCAGG TTAATAACCA ACTACTTTTG CAGGAAAGGG	1740
AAAATGAATT ATCTTTGGCT TCTGTTAAGC AAAACTACGA AGCCAGCTC AAGGCAGCTA	1800
GTGAACAAGT CGAGTTTTAT AAGAATTTTA AGGCTCAACA ATCTACAAAA GCGATTGGGG	1860
AAAGCTTAGA ACAGTATGCA GAGAGTGAGT TTAACAAGGT TGTAGTTTC GCCTTTCCAA	1920
ATGCTTACTT TGAGAAGGAT AACAGGTCT CTTGCGGTGG GTCTAAAGGG GACTTTATCT	1980
TCCGTGAGTG TGATGAAAAA GGAGTTGAAA TCATTTCTAT CATGTTTGAG ATGAAAAACG	2040
AAGCGGACGG AACAGAGAAG AAGCACAAGA ATGCAGATT TTACAAAGAA TTGGACAAGT	2100
ACCGTGCGGA GAAGAACTGT GAGTATGCCG TTTTGGTGAC CATGCTTGAG GCTGATAATG	2160
ACTACTTTAA CACAGGGATT GTTGACGTCA GTACAGAGTA TGAAAAAATG TATGTTGTTT	2220
GTCTCAATT CTTTATCCAA TTGATTGGTC TCTTACGTAA TGCGGCGCTA AATTCCTTAA	2280
AATACAAGCA GGAGTTGGCC TTGTTTCGGC AGCAAAATAT TGACATTACG CATTTTGAGG	2340
AAGATTGGA TGCCCTTAAAG CTAGCTTTTG CTAAGAACTA TAATTCAGCT TCGACTAACT	2400
TTGGAAAAGC TATTTGATGA ATGCACAAGG CCATCAAACG CATGGAAGAG GTTAAGAAAT	2460
TCCTGACCCAC ATCTGAAAC CACTCCGTT TAGTACAACA CAAATGGAA GATGTCTCTG	2520
TTAAAAAATT GACCCGAAA AATCCAACAA TGAAGCGAA GTTCGAAGCA CTGAAGGGGG	2580
ATGAGAAAGC AAAAAAGAAC GGTATTATTA ACTTAAAAA GGAAGCAGGA ATGACCTCGC	2640
ATGATGCGGT TTTTAAACTG CGTAAGATTT TGGGAACCAA GAAATTTGGT CATGGTGGAA	2700
CCTTGATCC GGATGTGGTG GGTGTTTTGC CGATTGCGGT TGGCAAGGCG ACACGCATGG	2760
TCGAGTTTAT GCAGGACGAG GGTAAAGATCT ATGAGGGGGA AATCACTCTG GGCTATTCCA	2820
CGAAGACTGA GGATGCTAGT GGGGAAGTGG TCACAGAAAC COCTGTTTTG TCTCTCTTGG	2880
ATCAAAAGCT TGTGTATGAA GCGATTGCTA GCTTGACTGG GCCTATTAAT CAGATTCCCC	2940
CTATGTATTC GGCAGTTAAG GTTAATGGTC GCAAGCTCTA TGAGTATGCG CGTGTGCTGC	3000

1184

AGGAAGTGA GCGTCCAGAA CGTCAGGTGA CCATTATCA ATTTGAGCGA ACAAGTCCGA	3060
TTTCTTATGA TGGCCAACAT GCCCGATTCA CTTTTCGTGT AAAATGCAGT AAAGGGACCT	3120
ACATCCGTAC TTTGTCAGTT GATTGGGTG AAAAGCTTGG TTATGCGGCT CATATGTCCC	3180
ATTTGACTCG TACTAGTGCT GCTGGCTTAC AATTAGAAGA CGCTCTTGCC TTGGAGGAAA	3240
TTGCTGA AAA AGTAGAGGCT GGGCAATTAG ATTTCTCCA TCCTTTAGAG ATTGGGACAG	3300
GTGACCTTGT CAAAGTTTTC CTAGTCCAG AAGAGGCTAC AGAAGTTGCG TTTGTCGT	3360
TTATTGAGCT AGACCAACG GACAAAAGAC TGGCTGCCTT TGAAGATGAT AATTTGTTAG	3420
CCATTCTAGA AAAACGGGCG AATCTCTATA AGCCAAGGAA GGTTTTTCAG TAGATCGTTT	3480
AGGAATAAAA ATCGGGTGAT AGATAACAA TGCCTGATAA AACCCATAC TAATAGTAGA	3540
ATGGTTTTGG GAATATAAT ATTCCAATTG TTGCGAGTTG TAGGTACTCA AATAATCTAT	3600
ATAGAAATTT AGAGGTCTGA AATGAAGCAA TTTAAATTC TTTCAGATAA ATATTATGAG	3660
TCCATACAGG GTTCTGATGG GAATCTAGGC CCAGGATTTG GTGTGATAAT TCCATGATGC	3720
GAAATGAGTT TCGAGAAAGG GTGGAGCAAC TTCTTCAACA AAAAGAAATA AATGAAAATA	3780
GTGAGTTGAG TCACCTGTTT CGTCTTGCTA TACAAAATTT AGACAGAAAT GAAAATATCC	3840
AATCGGTGAT GGCCAAATTG AGTCAAGGGT TGTCACTTTA CCTCATGACG CATCATATCC	3900
AGGCACCTAA GTCTGTCTAT GATTTTGGTT TATGGA	3936

(2) INFORMATION FOR SEQ ID NO: 203:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 1230 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

CATCCAGCAA CTGCTCCTCT GAGCGTTTCA AAATGATGT AATTTTCTA GTTTTTCTA	60
ATAAATGTGC CATTTTTAC CTGCAATTTA ATCGCTATCA TTATAACATA AAAACGTCTC	120
TTTTTCAATA ATTATCTGAA AATTCTTTAT TGACTTGATC TGACTTACAA TTTAAATAAA	180
AACCAGAATA TTTTAAATTA AATTGTCTCT TTCTATTGA CAAGTTGCCT ATTTTGTGT	240
ATCATAATAT TATAAAGAT AATATAATTA TTTTATTTGT CTTTTACATC TCGGTCTCCT	300
TATATAAAAA AGCGATTTCAT TTTGAACGCG TTTTCTTTAT TTATGCGCTT TGTACGAAT	360
AACAAAGCCT GTTTGCTTTT CGCTTAAAGT ATTGGTGGT TTTTATTTAT CCTTACGGA	420
ACGTTTTTCC TTATCAAAAC GATCGTTGCC ACGACTTCTT TTTTGAACAT CATCACGGCG	480

ACCATTGCCA CGGCGATCAC GCTCTCGAGC GTCCGTCCCA CGACGGCTC CACGACCTCC	540
CTTAGCTTTA CCACCGAAAC CATTACCTGA TGGTTTAAAC GGTAGTGGT TTTACAGTGC	600
AATCTCCACT TCTGGAAGGC TATCTGGGTC TTGGACTGTC AGACTCAAGA TATACATTGC	660
CAATTCCTCT GGAGTAAACT CAGCAGCCAA TTTGCGAGCA TCCTTACCAA ATTCTCAAA	720
GTTGGCAGCA ATGCTTTTCA CTGCAAAATC ACGTTGAGT TTTCTGAGAG CTACCTGTTT	780
TTTGTATTGG AAGGATTCTT CTACACTTGC AGGTTTGAGA CTTTTCATGC GTTTCTTAGT	840
CAAGTTTTC AATGATTGAA GGTAAACCAT TTGCTTTGGA GCAACAAAG TAATAGATTG	900
ACCTGACTTA CCAGCACGAC CTGTACGACC GATACGGTGA ACATAACTCT CAGATCTTG	960
TGGAATATCG TAGTTGTAGA CATGGGTAC ACCTGAAATA TCCAAACCAC GCGCTGCAAC	1020
GTCTGTGCGA ACCAAAACAT CAAGATTGCC ATTTTAAAG TCACGAAGGA CACGAAGACG	1080
TTTGTTTTGG TCTAGTGGC CATGAATGCC TTCTGCAAG AAGCCAGAA TTTTCAAAAC	1140
ACGAGTCAAT TCATCCACAC GCGTTTGGT ACGACCAAT ACAATAGCGA GTTCTGGTTG	1200
TGCCACATCC ATGAGACGAG TCATGGTGTG AAA'TTTTCT TGTTCCTTAA CACGATATA	1260
GTAATGGTCA ACCAATTCTG TTGTCAATTC CTTAGCCGCA ATCTTGACAT GTTCAGGGGC	1320
TTTCAATAAC TGAACACCGA TACGTTTGAT GGCATCTGGC ATAGTTGCTG AGAAAAGCAA	1380
AGTTTGACGG TTCTCAGGTA CACGGGAAAT AATGGCTTCG ATGTCTTCAA GGAAGCCCAT	1440
GTTAAGCATT TCATCCGCTT CGTCAAGGAT AAGGGTTTCA ATGTCTTGTA ATTCAAGGC	1500
CTTGCGTTTA ATCAAGTCCA AGAGGCGACC TGGAGTTCCC ACCACAATAT GGGCACCAGA	1560
TTTAAGAGCC TTAATTGTGT TTTCAATGCT TGATCCGCGA TATACTGAAC GGACTTTGAC	1620
TCCCTTACTA CGACCAAAGC GGAAGGTC TTCTTGACTT TGGACAGCTA GTTCACGAGT	1680
TGGAGCGATG ACCAAGGCTT GGATAGTCGC TTCTTCTGTA CGGATTTTTT CAAGGGTAGG	1740
CAAGCCAAAG GCTGCAGTTT TTCTGTGACC AGTCTGAGCT TGACCGATAA CATCCTTGC	1800
TTCAAGGCCC AAAGGAATAG TTGTGTTCTG GATAGGACTA GCTCTACAA AACCAAGCTT	1860
TTCAATTTCT GCTAGCAAAAT CAGCAGACAA GTTTAATTCA TTAATTTTCA CGTTATTCTT	1920
CTTTCTAAAG GTGGTGGGAA GCCACCTAT AGGGCTTAGT TTATACTTTT CTTTTATGA	1980
CGTATTTTCA TATAACTAGA TATAAAATCG TGTTCCTCT TTTCCACAAA AGAAAAGTAC	2040
TGTTTTCTTT GCAACCTATC TAGTATAACA CAAGACCAGA GCAAAAGATA GCCCATTTT	2100
TACAGAAAT CATGTAAGCG CTTTTTGACT TTCTTTTTTG ATTGAACGAC CTAGATAATA	2160
AGACAAAGCC AAGGCGATAC TGTATAAAAT GAGAAAAGC AACAAAGTTT GTGTGTACGA	2220



1186

ATGAGCCATT TTATANGTCT CTGCTAA'YAA AATAGGTCCT GCTAAACCAG CCATPGCCCA	2280
AGCTGTTTAA ATATAACCAT GCAGAGCGGC CAATTCCTTG GTTCCAAAAA TATCACTGAG	2340
AT'AGCTTGA ATCAAAGAA AACAGCTCC ATAGCAAGT ATCAAAATAG ACATAGCAAC	2400
TACAAAT'AA ACGGAATCTG TAAAGAGCCA AAGTGAGAGA GAAAAGAAAA GATTGACAG	2460
CAGTAATATA CTAAGGGT'TA GAGGGCGACC GATATAGT'CA GACAAACTCG CCCAGAGCAA	2520
GGGACCAAAAT CCAT'GAAAA TCCCCAAAC ACCCACCATT ACTGCTGCAT GACTTGTAGA	2580
CAAGCCAGCC ATCTCCTGTG CCATPGCGA TGCCCGTGAA ATTAAGCCTA AACCACAAGC	2640
TATGTTGATA AAGAAAT'AA TCCAAAGCAT ATAAAAACGA TTGCTTTT'TA GAGCTGATT	2700
TGCAGCCATT CTTTGGCTCA AAGAGGCTGT TTTTCTTTTC CCTGAAGAAG ATAA'AAATGC	2760
AAGCTCTTGC TCATTTGGAC GCTTAATGAA TTGTGAAGCT AGGAGCATGA TAATAAAGTA	2820
ACTTGCCTCT AAAATATAAA AAGTTTCTAC AAGCCCTACC CCTGCGATGA GGTGTTGCGC	2880
TATGGGACTA GTCAAT'AAAG AAGCAAAACC AAACCCATA ATCGCTPAAC CTGTTGCGAG	2940
ACCAGCTTTA TCAGGAAACC ATTTTATAAT CGTCGACACA GGGTAAATAT AGCTTGCCTC	3000
CAAACCAAGC CCACCT'AAAA TGCCATAAGC GAGATACAAC AACCACAGCT CTGACGCTCT	3060
ATTGCAATC CTGTTAAGAT ATTTCCACCT GCGTATAGAA AAGCAGATAG ACTTCCCATG	3120
ACTTTTGGAC CAAATTTTTC TACCAACGC CCATATAATG CAGCCGATAA GCCCAACAA	3180
AAGATTGCTA GACTAAAGCC GAAGGCACAA GAAGCCTGAT CCCATCCCCT	3230

(2) INFORMATION FOR SEQ ID NO: 204:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5096 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

CCTATGAAGA CTGTCCCAAC TGGGTGTCCT TCTAGGCTAT CTGTCTCTGC CACTCCAGTC	60
AAACTAATTC CAAATCAGA CTGGGCTTGT CTTCGTGCTT GCTCAGCCAT CTTCGTAGCT	120
GTAATTCAG ACACCACACC ATGTTCTTCC AAATCTTGG CAGGAATATC CAACATCCTT	180
GATTTTTCCT CCAAGCTATA GTCCACAAAA CCACCCCTTAA ATATACTTGA AACTCCAGAA	240
AAATTCGCCA CGGTAGCTTG GAAAAGACCT GCCGTCAAAC TCTCTGCAGC CGCGATGGTT	300
TTCCCTTGCC TTTTCAGTTC TTCTACCACA ATGCTGGCTA AACTAGTTTC TTCCCAATAA	360
CCATAGCAAA AGTCTCGTAA AGAAATTCCT TCGAAAGTCT GCGAGTCCAA GATTGTGATT	420

1187

TCCAAGATAT	CCAGCGCTTG	ATTGCGCTCT	TCTTGACITGC	TAGCCTTTGT	TGACAGACGT	480
AGAGTGACTT	CTCCTGTCTT	GGCATAAGG	GCCAAAGTAG	GATCGATCTG	ATTATCAATT	540
AAATCAGCCA	AAATCGTAAC	CAACTGGCTC	TCGCCAATCC	CAAGAAACG	AAGAACTCGG	600
GAATACAGCT	TGCTCCCTGT	CATCAACTTG	GATAGAGTT	GGTTTAAGAC	CATCGGTTTC	660
AATTCACCTG	GGGACCTCG	AAGGACGACA	TAGTCACTC	CGTCTACTTC	TAAATTTCCCT	720
CCAACAGCCA	GTCTGTGTTT	GTTCGGCAGT	GGAATCGCTC	CTTCTACAAT	TTGAGCTTGT	780
CTTTCGTTAT	TCGGTGTTTG	GGCATACTGT	GGTCGCAGGG	TAAAAAAGAT	ATCCAACCTC	840
TCCTGAGCCT	GAGGATCAAA	GACTAATGCT	TTCCCTAAAA	ATTAGCTAG	GGTTTGTTTG	900
GTTAGGTCGT	CCTCAGTTGG	CCCCAAACCG	CGTGCAAAA	TCACCAGACT	CTACGTTGA	960
CTGGCAATCT	CAAGCAAAAG	CAAGAGACGA	ACTTCATTGT	CTCCTACAGC	CGTCTGAAAA	1020
TATACATCTA	CCCCAATCTC	AGCTAGTTTT	TCCGACAAA	ACTGGGCATT	GGTGTGACA	1080
ATCTGCCCTG	TCAAAATCTC	TGTTCCAACA	GCAATGATTT	CTGCTTTCAT	GTTCCTCCT	1140
ACCTATCTAT	TCGATTTTTT	TTGAAAAAAT	CGCAGGAATT	TTCCCTACAGT	TGATTTTTTTT	1200
ATTTGTATCA	AAAGTTAAAT	ATCTTCATCA	CCAACAGGTG	CTCTGCCAAA	TAAATCTTCA	1260
AATAAAACCG	CATTGGTTTC	AAGCTGAGTA	ACTTCTTCTT	GTCCCAAGAG	ACGTGCGAGT	1320
AGATTTTGCA	TTTCCAACAT	ATGTGCTCTC	GAAACAATCT	GGTAAGAAAC	ACCTTGAAGT	1380
ATCTCTCCTT	CACCCTGCAA	CTGCTGAGTT	TCAATGGTTT	TAAATGAATC	TTTATAGCCT	1440
AGCAAGTTAG	GGATACTTTT	TGCAGACAAA	TCAATATTGG	TCTGCATATT	GTCACTCAAA	1500
GCTTTTAGAA	TCTCTTGATA	ATGACCAATG	CTATTAAAC	TGAGAGCTTT	TTCCATGACT	1560
TTTTGAATAA	CTTCAAGTTG	ACGTTTTTGA	CGACCATAAT	CCCCCTCAGG	ATCTTGTGTA	1620
CGCATTCGTG	CATAGACTAG	GGCTTCTTCT	CCCCCAATAT	GTGCTCCCC	AACACCGATA	1680
GAAATAGTAT	TAAATCTCTC	TTGGTCACTG	ATAGAAATGG	GGAAACCTAG	GATATTATTG	1740
ACTGTAATAC	CTCCTACTGC	ATCCCACTAGT	TTTTGCAATC	CTCTCATATT	GACCATCACA	1800
TAGCGATCAA	TATGGATATT	CATCATTTTT	TGAATGGTTT	CTATAGCAAG	CTCTGCTCCA	1860
CCATCTGCAT	ATGCTGAGTT	CAGTTTCGCT	TCATGAGCCT	GACCATTTCC	TGATTTCAATG	1920
CGGTTCAGAA	TATCCCGCTC	TAAACTCATC	ATTGTTGTTT	TTTTCTGTTT	AGGATTCACT	1980
GTCAATCAAG	TCATGCTATC	ACTTCTACCG	ACCCAAGTTT	CAGTTGCTTC	AACATTTCCG	2040
GTGTCCACTC	CCATTAAACG	AATGGTTAGA	GGTTCAGTCG	CTTCAATAAC	CTTGTGTTCT	2100
TCACCGATTT	TTTTATAGGT	TTTAGCTAAG	GTTCCTGTCC	CTTGTGATA	AATAGTATAA	2160

1198

GCAAAACAC	CTACTCTAC	TACAGTTACA	GAAAGTAAAG	CTAGCACCAT	TCCAATAATT	2220
TTTTTAACCA	TATTTCTACT	AACCTATCAG	TTTACCCATC	AAGTAAACAT	CGATAAATTT	2280
CCCTTCTTCT	ATATATGCC	CACGCTCTTG	GCTACCTTCA	ATGCAAAAGC	CATGCTTTTG	2340
ATAAGATGG	ACTGCTGCTT	GATTACGAGT	TTGGACAGTC	AGTTGGAGAC	GACGCAGAAT	2400
GCCACTTGCT	TGTGCCCATC	CTATCGCTTC	TTCTAGCAAC	AAACTTCCCA	AGCCATTATT	2460
CCAATATCTT	TTTCCAAATCA	CAATGAAGAG	ATCTCCAATA	TGACGGACTC	TCTTACGCTG	2520
ATCAGCTGTA	ATATTACAA	TACCAGCAAT	TTTGCCATTT	AAGAATGCAA	GTAAGGTTAT	2580
CTGATTGTCC	GAACTAGCTT	GCTTGTGTGAG	GAATATTTCC	ATCTCCTCAC	TAGTCAAGAG	2640
AATACCATCT	CCGCTTAGGC	TGGTAAAGTC	TGTCCTCAAA	CTCACACGAT	TTAAAAGGC	2700
CACATAATCA	GCTGCATCTT	TGGGCTCTGC	TTCCCTAATG	AGCAATTGAT	ACTCCATAIT	2760
GAAGCTCTCT	TAACAATTTT	TCAGCAGCGA	AACCTTTTGC	CTGAAAATTT	AAACGGGCTC	2820
CATCTGCTTC	TTTTAGAAAT	TCCAATCTTA	AATAAGCATC	TGGCAAGGCA	TCTCCTAAGA	2880
GATTTCCCCA	CTCAATPACA	GTACGCGCG	CACCAAGATG	AAACTCATCC	AAGTCGATAG	2940
AATCAGCATC	TCCTTCAATA	CGATAAACAT	CTAGGTGATA	AAGTGGAAAT	CGACCTTCAT	3000
ACTCTCTCAC	GATAGTATAG	GTGGGACTTT	TAATCATTTG	AGAAATCTGT	AATCCTTTTG	3060
CAAGTCCCTT	AGTAAAGGTC	GTTTTACCTG	CACCCAGTTC	TCCAGTTAAG	ATTAAAACAT	3120
CATTCTTTTG	TAATAGATGG	CCCAACGCT	CCCTAAGGC	TTGCAACTCT	TCTTCATTTT	3180
TTGTGTACAT	ACTCTTATTA	TACCAAAAAC	TTTTCTTTTG	TGCTATTTTT	CCTACTAAAC	3240
TTATCATCAT	AACATCCATA	AAAAACAAGC	TTTCTCTAAA	AGAAAATGAG	CGTAACAATG	3300
ACCAATACAA	GATCTCGGAA	AATATGACCA	TAAAAGGAAA	CTTCTTCTTT	AACCGAATTT	3360
GGGACAAAT	AGGCTGAAA	AAACAAGGCC	AGTCCAATAT	AAATCAGAAG	TGAGACAATG	3420
GTCAATGGAT	TTCCTAAGAA	AAGAAGTGT	GCTAAAATAG	TCACCAACAC	TGTCTTTTTT	3480
CTGTCCAGCA	TAGCAAGAAA	ATCGCGCAGC	TATTTTTTCA	AGGGTAAAAA	AATCAGCAAA	3540
TCTAGCCCAA	ATAGGAAAAA	GAAGGATGGC	AAATAAAAGT	CAACTAATTC	TTGTGTCAGC	3600
GTATTTTTGA	TGAACAAGTT	ATCTGACAAA	ACAAGAACAG	CTCCTAACAA	ATTAATTAAAG	3660
AGTACATATC	TGTAAAAAAG	CTTCACCGAC	TTCTTACTGG	CTAGGACACT	ATGGACTTCT	3720
TGCTTACGGG	TATAAGATA	ATTTACTCCA	GCACAGATTC	CTGAAACGAA	AACCATGCTT	3780
CCGATGAAAA	AAGCTGTACT	TTGTTTAAAG	GACAAGATGC	ATTCCTTCCA	TAGGAACAG	3840
CTACTCAAAC	TGATTGTAAAT	TAAAGCTAAC	AAAAATAAGA	TTCTCATTTGA	TTTCAATCTC	3900
TCTCTCCCTT	CCTACCAATC	ATTATACTAG	GAGAAAAGAG	AGAAGCTGTT	CTAATCTTCT	3960

1189

CAAATGTCTC TTTAAGACGC TAAACAAACA CTAGAGACTA ATACTCAATG AAAATCAAAG 4020  
 ATCAAAC TAG GTAGCTAGCC ACAGGTTGCT CAAACAGTG TTTTGAGATT GCAGATAGAG 4080  
 CTGACGTGAT TTGAAGAGAT TTTGGAAGAA TATAAATTG AAATCATGAA AATCGTCAA 4140  
 ACGGTGGT GTTTGTCTC GCACCTCAG GAGCGAGACG GACTCAGAGT CACATAATTA 4200  
 TAAGGCTGAT AGTATTAATC TAACATATCAG CTTmCAGGTT ATTTAAGCTT TCAGAAAAAC 4260  
 TATAATGTCA AGATTAAC TAACAGTATCT AGTTCCTTCA AATAAATTTT TATCTTCATC 4320  
 AACATTAAG GATTTGTATA AATCTTACAT AACTCTCTTG CTTCATATA ATAATTTTG 4380  
 ACTTGTCTC TGTCTAGAAA TTTGGCTCA GCATTCTCA CAAGAATAAG TAGAGGACC 4440  
 AATTGTAGC TTGTCTGCT TGTTTACAG AGTTCACG TTTCAAGAGC TTCTTGATG 4500  
 GCTTCATTAT ATTTTCTCT TGATACTAGG TAGTGAGCGT AGTTGTAACG AACTCTGATG 4560  
 TAGCCAAATA AAAACTCTTG ATGGTCCAAA TTTTGTCTC GATACAACCT TATTAAATGA 4620  
 GAGTAGTTTG CTCATATTC TTGTTACAG CCCACTAAGG AATAGAAAAT AGATAGAGTA 4680  
 TTCAACGCCT TTAATAAAT CAGAGTATTT GAAGAGACTT TTAATAATAT ATTTCCAAT 4740  
 GACGAATTG CTCACACTT ACTGTCATAT TGATAGAAGT CAATTAAGA TTAATCCAT 4800  
 TCAAGGTAAG TTCGGTCTC TAATGTAGA AAAGTGCTC GTTCTACTTC TATTTTATAA 4860  
 AGATATTCTA AATCGTCATA ATTTCTGTCA TCTAATAGC GAGCAGATAG ATGTTTGAAA 4920  
 TTAGAGAGT TAGACTTAAC TTGATTTGT TCAATGAAAA AGTAATCCAA AGGACTTCA 4980  
 AGTCGTGAG AGAGTTTGA TAACAAGTCT CGGAGGGAA TAAATGACC TCTTCAAT 5040  
 TTACTAATCT GGCTTGTCT ACAAAATCTT TCTGCAAGAG TTTGTTGGA GAGTCT 5096

(2) INFORMATION FOR SEQ ID NO: 205:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2395 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

ACAAGATAAA AATAAGGAT TACAATGGG AATATAAAGT AAACCGTAA ACCTAAAG 60  
 AAAGAGAAA AGATAAAAAT TGACTTGTG GGCATGGAC ATTTTGCTAC AGGATTAT 120  
 AGTCTTTAC AATTGATTC AGGTAATCAA GAAATGTGG AGCGCATGA CTTTGTGAA 180  
 GGAATGTCAG CAGATGAAC CAAGCAAAA ATCTTACTTG CAATTTCAA TGAAGAAGAA 240

		1190	
GTTTTAAATCC	TAAGTGATCT	CTTGGGAGGA	TCGCCATTCA AGTTTCTTC TACCATAATG 300
GGAGAAATC	CAGCCAAGAC	AATGAATGTT	CTCTCGGTTT TGAACCTAGC CATGTTAATG 360
GAAGCAGTCT	TGTCTAGAA	GGCTCATAGC	TTTGATGAGG TTGTTAATAA ATCAGTAGTG 420
CGCGCCAGG	CGCGAGTCOT	AAATGGTAAA	GAATGTTTTT CAACGGATGC AGAGGAAGAG 480
GAAGAAGATT	TCGAATCGGG	TATTTAAAGG	GTAATAAGAA GTTACGATTG 540
AAAAAATAA	ATCGCCTGAG	CGCTTCTTAG	AAATACCACCT TCTGACGAAA GAAGAAGTCG 600
GCCAGGCAAT	CGATAAGGTT	ATTGGGCACT	TAGAACTCAA CCTTGACTAT TTCAAGGAAG 660
ATTTCCCGAC	GCCAGCTACC	TTTGATAATG	TCTATCCAAT CATGGATPAC ACGGAATGGA 720
CCAATGGTTT	CTGGACAGGA	GAACGTGTGT	TGGCTTATGA ATACAGTCAA CAGGATGCAT 780
TTAAAAACAT	CGTCTATAAA	AATGTTCTTT	CTTTCCTGGA TGTGTCAAT AAGAGAGTAG 840
AATTGATGCA	CCATGATCTC	GGCTTCTTGT	ACACACCGTC TTGTATGGCT GAATATAAGA 900
TAAATGGAGA	TGGAGAGGCT	AGAGAAGCAA	CCTTGAAGTC TCGAGATAAG TTGATTGAAC 960
GCTATCAAGA	AAAAGGTGTT	TTTATTCAAG	CTTGGGAGGA CTTGGGCAAG AAAGAGCATT 1020
ACCGTTTGAT	TATCGACTGC	TTGCTCAATA	TCCAACCTCTT ATTCTTTGCT TATCAAGAAA 1080
CAGGCGATCA	AAATACTAC	GATATTGCAG	AAAGCCATTCT CTATGCTTCA GCTAATAATG 1140
TAATCCGTGA	TGACGCTTGG	TCTTCCACA	CCTTCTATTTC TGATCCTGAG ACAGGTCAAC 1200
CCTTTAAAGG	TGTAAAGAGA	CAAGGGTATA	GTGATGATTC ATGCTGGGCA CGTGGTCAAT 1260
CATGGGGAGT	CTATGGTATT	CCTTTGACTT	ATCGTCACTTT AAAAGACGAG TCCTGCTTTG 1320
ACTTGTTTAA	GGGTGTGACC	AATTATTCTT	TGAATCGTCT GCCAAAAGAT CATGTGTCTT 1380
ATTGGGATT	GATTTTAAAT	GATGGTAGTG	ATCAATCAAG AGATTCTTCA GCAACAGCTA 1440
TGCGCGTCTG	TGGGATTCAAT	GAATGCTAA	AACATCTCCC AGAGGTGGAT GCTGACAAAG 1500
ATATTATATA	ACATGCTATG	CATGCCATGC	TTGTTTCTTT GATCGAACAT TATGCAAAATG 1560
ATCAATTTAC	CCCTGGTGGG	ACAAGCTCTC	TCCACGGTGT GTACTCATGG CATTCAGGTA 1620
AAGGAGTGG	TGAAGGCAAT	ATCTGGGGTG	ACTACTATTA CTTAGAAGCC CTIATCCGTT 1680
TCTACAAGA	CTGGAACCTA	TATTTGGTAGG	AGGAGAAATA TGACAAAGCC AAATATTATT 1740
ATGACCCGTA	TCGATGAAGC	GTGATTTCAT	GGACAAAGAC AACTTTGGGT AAAATACCTA 1800
GGTGTATAA	CGGTCAATTG	TGCCAATGAC	GAAGTAAGCA CGGACAAAGT GCAACAAACT 1860
CTGATGAAAA	CAGTTGTGCC	AGACTCAGTT	GCCATGCGTT TCTTCCCTTT GCAAAAGGTG 1920
ATTGATATCA	TTCAAGAGGC	TATCTCTGCT	CAAAAGATCT TTATCGTTGT AAAGGATGTG 1980
AAGGACGCTT	TAACTTGTGT	AGAAGGTGTT	GTCACTATCA AAGAAATCAA TATTGGGAAC 2040

1191

ATTACAAATG CCCCTGGTAA AGAGCAAGTG ACACGCTCCA TCCTCCGGG TGAAGAGGAC	2100
AAGGCGGCC TCAAGGAATT GAGCCAAACT CATCAAGTAA CATTTAATAC GAAAAAAT	2160
CCACAGGAA ATGATGGAGC TGTCAAGTC AACATTATGG ACTATATTTA ACAGAGGAGA	2220
TGTTATGTC GATTAAATGA TTTCAGCGA TTTPAATGG ATTATGGACA GCTTTCTGTT	2280
TTAGTGGAAAT GCTGTAGGA ATTACACCA ATAGATGTAT TGTTCTGTCA TTGCTGTGG	2340
GAATTATCTT AGGTGATCTG TCATGCTCTT GCAATGGGAG CCAATGGTGA ATTGG	2395

(2) INFORMATION FOR SEQ ID NO: 206:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3342 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

CCTCTTTAG AGTTAATTT TGCAAAATCG TCGATTGTTA TATAAGGATT ATTATAGAGA	60
CTGTTGCGAA AGAATCTCTG ATATGTTTTT GAATCTTTTG ATACAAAAAC TATCTCTCTA	120
ATAGCATTTGC CACTGTGTC ATCAATTGGT AAACATACCG TAACTAGAAA AGAATTTATA	180
TTCAAAATAA AAAATTCTGA TGGCTACGGC ACAAATCCCA AAAGTGCTAA TATTGCGACA	240
ATTAGGTTAG CTCACCTCC CCCAAGAAG TAGAACCA CAATTCCTATC ACTATTTTTT	300
TCATTAGTAA TGTTCCTATT ACTCATTTGA CAAATACCGA ATGCTAATTA CACTGGAAAT	360
TTGAAATATA TTTTTTTTCT GAAATAGAAG AAAAAGGGG TAGCAAGCAT CTCTAGTTTA	420
TAAGATAAAC ATCTTCCCAC TAAAAAATGA CTAAGTTCAT GTAATGTAA TGTATTTAAC	480
GAATTTAAAA TCAATCGAAA ATAATAGATT AATGAATCAT TTGAAAAAT TATCAATAAT	540
AGGAACAA TA ACGGAATCAA ACATAAATAT ATGACAGAGT TATTTAATAT TTTCACATA	600
ATACCATTC TCTAACTAT TAGCTTCAAA AAGGCGTTTT TTCTCCCAAT ACATCTTCTC	660
AAAAATGTTG GAATCATAAT TTCTCAAAAT TAAATTTATG TCTGGTANG TCTTTCTTGA	720
TAAATCGGTTG TTTTGTACTT AATTTTCCCT TCAAGTACAT CTTCATTTT ATAAGTTGCC	780
TCCATCAACT GAGCCCTGCG AATATCTTTG AGTGAATTGG TAATTGAAC TTGGTGAAT	840
ATCTGTCCCT CCAATATATGA AAATATATCT CTAAGTATAT CTGACACATAT ATCAGAGCCG	900
TTACTCTCAG CAACATCTAA TGTTCACAACA AACTTTCCAG CTAATCGAAA AAGATGGCTC	960
CACCCCCCAA TCCTTTCAAT AAAGTTTTTT GGTCCACAG ATACGTTTGG TAAATATACA	1020

	1192	
GGAGAAGAGA TAAATTATAAT ATCAGACTCT AATAACTCTT TTTTTPAAC ACCTCCATCA	1080	
TCAGCATATAC TTTCGCCATC AATTCCTTTC TPAACAACT CTTCCTGAAT AGAATTAGAT	1140	
ATTTCCTAGCT CTGAATTGAA AGGTGTCCTG AAAGATATAT CAACATTATT TCTACTAGAA	1200	
ATGATACTTG AAAGTCCTCT AGATFACCTT AAAGCTTAG AGTTATGATT TCGCACTCCT	1260	
GCATATATFAA ATATTTTATT CATTTTAATT CATCCTCTCA ATTTGAATTT AGTAGATTTT	1320	
TCAGATAGT ATGGTACAAA AACAGACTTT TGTGACTICA CATTATPACA TATGTTTTGT	1380	
ATTAACCAAA AATCAATACT ATTTTGGAG TAATTTTGAT TTTAGITTA AATCAITTTCT	1440	
ATAACAGTAG CATATACCTC AAGCCGTTTA GCAATTAGAA TAGAACTTTT CTTTATTATA	1500	
TTATTTATCTC AACGAAAGC TACACTATTA AAAATATTTT ATAGAATTAC ATATTAACCT	1560	
AGTCAATCTT GGTATTTTTA TATTGCTTAA TGAGTGACA CCTCTATTTT AGAAACAAA	1620	
CTATAAATTA AGCTAGACTT CAAGTAATGA GGGGTAACCT ATCTTTTTGT CATTCGTATT	1680	
CAGTGGGATA TACCTTAAA AAGTATAGC AATACCAGC ACACCTGTAT ACAAGAAAA	1740	
ATCTGGGAAA TTGCTTGTTT GGACGATACG ATACTCTCCT TCTTTTGATT TATTCATTAC	1800	
AACACTACAC AATAAGACT CCAATTCAT ACTAGTATCC ATTTCTTTCA TGTAGTCGAT	1860	
GTAAAAATTT ATATATGCCA TACTTCCATG GCAAAATGTA TCATTATCTA AACTAGCTAC	1920	
AATTCCTCTT GGAACACTTT GGGGATGATT AACTAATGTC CCAAAATCTC CACTACACCA	1980	
CTTCAAGAA TGAATTTTGA TTTTCTCCCT AGGAAGTAGT TGTAAATTA ATTCTTTATA	2040	
TTTTTTAAGT CTGTGCACTT TATAAATATT TTTTAAATGA AAAATTACAC CTGATAGTCC	2100	
ATGGCCAAAA CTATATCCAA AATTACTATT ATCTCTCTCG CTATACATAT TATATAGCGT	2160	
ATCACCTAAA CTAAATACTA GCCTTGAAGC ACGTTCCTTC TCTATTCTCT TCCTATAATA	2220	
TCTTACCAGT GTATTAAATTA AAGGTAGAAG ACCATTAAATA TAGTCAGACT TGTTTGAAC	2280	
ACTTGCAAAA TCAGTCTTTT CAAGCTCAGT TAAACACTC TTTATATAAT TTAAGCATGC	2340	
GAGAGATTTT GTATCGTAAT CCTCTATAAT GGATAGAACA ATGAAATATC CTATATCCCC	2400	
AGTTAAACCA AATGTGCTCT TAGATAAAGA AACAGATGGC GGAATTGCGAC ATAACATTTT	2460	
ATTGTACAGT TGAATATATG ATGATTATAT TTTCAATAAT TTTACATAGT ACATAAACAG	2520	
TAAATATCCA GCTCTACCCC TATACATATC ATTTCCCGTT TGTTCAGAC ACCATTAG	2580	
ACCTTTAAAA TTAACAGGTA TACTCCAAAT TGGATATTCG TCATAAATAT TATTAATAAC	2640	
CAAAGAGTCT GCAATATTTT CTACTTCATT ATGCAGAATA GTAACATAAC TTTCATTTGG	2700	
GAGTTTTTTT CTATTAGATA AGTTTAATTT ATATCTTTTT TTTGCTGTAT CAAAGCTTGG	2760	
AAAATAAATT TCAATGATAT CAAGTTGCTT TCTCAAAATT TCCAATATAT TATTAGGTAA	2820	

1193

ATATTTCATA AATAGTCAT ATCCAGAAAA TGTAGTGTAGG GAAATAAAAT GATTTCCTAAA	2880
ATCATCGTAG ATTTTCATGTA TATTGTATC TGTATAAAAA ATCGGAATAT CTAATAACCT	2940
CATTGTTCAT CATTGCTTG CTACAATACC TGTATTAGAA AACTTATTGC TCCAGAGATT	3000
TTCCAATGCT TTTTCTCTAT CTAACATTTT TTCATMAAAA TCAGGATGAT ATAAAAAGA	3060
TAGTACTGAA GCATAGCTAT TTGTGCTCT AAAAAGTACC CTGTCTTTA AACCATACAA	3120
GTTGCTTTT AATAGCATTT TAAATCTTC TGTTTTATT AACTCTTCAA ATATCAGATA	3180
AAATCCCTTA AAACCTTTT TGAAATCTTT TATATACTTA TCAAAATCTA TATCACCATC	3240
CCGAACAGGC AGGTTTTTCC CACCTTCAA ATCAATTTTC CCAATATCAA ACITTTACCTT	3300
ATCAGTATTT AATTAATTA AAATTTGACC AGGGATCCTC TA	3342

## (2) INFORMATION FOR SEQ ID NO: 207:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3454 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

GAGAAAAAGAA TGTTAAAGAA AATGATATT GTAGAAGTTG AAATTGTTGA TTGACCCAT	60
GAAGGGGAG GAGTTGCCAA GSTAGATGGT TTGGTCTTTT TTGTAGAGAA TGCTTTACCG	120
AGTGAAAAAA TTCTCATGCG TGTCTCAAG GTCAATAAAA AGATTGGCTT TGGAAAAGTT	180
GAAAAATACC TTGTCCAGTC ACCACACCGT AATCAAGATC TAGATTGGC TTACTGGGT	240
TCAGGAATCG CGGATTTAG ACACCTTTCT TATCCAGAAC AGCTCAAGTT TAAACCAAG	300
CAAGTCAAGG ACAGTCTCTA CAAGATTGCT GGAATTGCAG AAGTAGAAGT TGCTGAAACG	360
CTTGGTATGG AACATCCAGT CAAGTATGCG AATAAGGCGC AGGTGCCGT TCGTCGAGTG	420
AATGGTGTCT TGGAAACAGG ATTTTTCGGT AAGAATTCGC ATAACCTCAT GCCCTTGAA	480
GATTTCTTTA TCCAGGATCC TGTCAATTGAC CAAGTGTAG TAGCTCTTCG AGACCTGCTC	540
CGTGGTTTGG ATTTAAACCC TTATGACGAA AAGGAACAGT CTGGATTGAT TCGGAATCTT	600
GTGGTGGCTC GTGGTCACTA TTCAGGACAA ATCATGGTGC TTTTGGTGAC AACTCGTCCA	660
AAAGTTTTC GTGTTGACCA ATTGATTGAA CAAGTTATCA AGAGTTCCC AGAGATTGTG	720
TCTGTCTATC AAAATATCAA CGACAGAAAT ACCAATGCGA TTTTGGTAA GGAATGGGCG	780
ACTCTTTATG GTCAAGACTA TATTACGGAC CAGATGTTGG GAAATGACTT CCAAACTCGCT	840



1194

GGCCCAAGCT	TTTACCAAGT	CAATACTGAA	ATGGCGGAGA	AATCTTATCA	AACAGCCATT	900
GACTTTTCAG	AGTTAAAAAA	AGATGATGTG	ATTATTGATG	CCTATTCTGG	TATTGGAACC	960
ATTGGTTTAT	CAGTCGCCAA	GCATGTCAAA	GAAGTCTACG	CTGTTGAAGT	GATTCCAGAA	1020
GCAGTAGAGA	ATAGCCAGAA	GAATGCTTCT	TTGAACAAGA	TTACTAATGC	CCACTATGTC	1080
TGTGACACCG	CTGAAAAATG	CATGAAGAAA	TGGCTCAAGG	AAGGTATTCA	ACCAACCGTT	1140
ATCTTGGTTG	ATCCTCCACG	CAAGGGCTTG	ACAGAAAGCT	TTATCAAAGC	AAGCGCCCAA	1200
ACAGGAGCCG	ATCGCATCGC	CTATATCTCC	TGCAATGTCG	CAACCATGGC	CGGTGATATT	1260
AACTATATCC	AAGATGTTGG	ATATGAATTC	AAGAAAGTCC	AGCCGCTGGA	TCTATTTCTT	1320
CAACGCATC	ACGTCCGAGC	GGTAGCACTT	TTGTCCAAC	TGAGATGCGA	TAGCACATA	1380
AGTGTGTAAA	TTGAGCTGGA	TGAGATGGAT	TTGACAAATG	CGGAGACCAA	AGCAACATAT	1440
GCTCAAAATCA	AAGAATATGT	TTGGAATAAA	TTTCAATTAA	AACTTTGAC	ATTATATATT	1500
GCACAGATAA	AAAAAGAAATG	TGGAATAGAA	TTACGAGAAC	ATTACAACAA	GTCTAAAAAG	1560
GATAAACAATA	TTATTCCACA	GTGTACACCT	GAATAAGAG	AAGCCATCAT	GGATGCTTTG	1620
AGACACTTCA	AAATGATTTA	ATAGAAAAAG	ATGACAGTAT	ATGACTTTCT	GCATTTATTA	1680
CATTCTTACT	TGTTATAGGA	ACAGCTATTA	TTCTTTTCTT	GCAAGGTATC	AAATTAGAAA	1740
TAGGCTCAAT	ATAAAGATTC	ATAGGATCAT	TTTTATATTT	AAAGGAGCCT	TGAAATGATT	1800
GATAAAGGCA	ACAAAAAATT	TTAGGATAAA	TTTGCTAAGT	TGTATGCTTC	TTTTATGAAA	1860
AAAGATAAAG	AGGTTTATGA	TAAAGTTTGT	GAATATCTTA	GTCTCTCATTT	GAATAAAGAT	1920
ATGGAGGTGC	TTGAACCTGC	TTGTTGGTPT	CGTGTACATA	CAGTTATAGA	GGCAAAATAGT	1980
TATGTAAATA	TAAGGAGTTC	AAGACTTCTA	CCAAAGTTTA	AAACTCAAAA	AATAAATAGT	2040
TGGTGTGCTG	CTTACAATAT	CCATTTTAAAT	AATGGATATTT	GTAAGCAGCA	CCCCATGAA	2100
TTTAAAGATT	CTTTAAAGAG	TCTTTATTTG	TGATGAAAT	TTAATATGTA	AATCTCAGAC	2160
GATGAAATTT	AAAACTCTTA	TCGTCTTTT	TATACTCAAA	ATTAGGAGGT	AAAAATGOTA	2220
AGGATAAAG	GTCCCACTTA	AAACAATTTA	TGGCAAAATA	AGGACGGAAAT	AACAACAACA	2280
ATTCTCTTAA	ACAAATCACT	AAATCAATGT	AAGATTGAAT	GAAATCAATA	TTTATGCTAT	2340
AATTAATATA	ATTAAATGAA	GAATAAAGAA	GGATATTTAT	GGCACTTAAC	TATAAACCAT	2400
TATGGATACA	GTTAGCAAAA	AAAGACTTAA	AGAAACAGA	TGTATATAGT	ATGGCAGGAC	2460
TTACAACAAA	TGTTATGGCA	CAATGGGAA	AGGATAAAC	AATTACATTT	AAGAAATTAG	2520
AAAGAAATAT	TAAGGCTTTA	TCTTGCACTC	CTAATGATAT	TATTAGTTTT	GAAGATAAAT	2580
TTAGTGACCA	GGAATAGAAA	ATGACTTTAA	GGACAGAGAA	TCAAGTTAGG	GATTATGCAA	2640

1195

GAGAAGTATA GGCTTTAATG AAGTTGAAGA AAACATCAAT CAAGGTACTG GTCAAATAAC	2700
TACTTTTAAAT CAATTAGGCT TCAAGGGATA TTCAAATAAG CCAGATGGTT GGTATTTACC	2760
TAAAAAATAG AATGATGTAG CAATAATCCT TGAACACAAA TCAGAAGAAA GAGATATTAG	2820
CAAAACAATT TTTATTGATG AGTTAATGAA AAATATAGAC ATAAATTAACT TAAAAATAA	2880
AAC TAGATCC TTTTTTGAAA AAATTATATT ATTAAATTG TAACGTATC TATTGACAAAT	2940
GATAATTACT ATCGATACAA TAGACTTGAA ATATGTTTAA GGAGTTTTTA TGAAAACAAA	3000
TTTTTCTTAA TmGCTATTTT AGCTATGTGT ATAGTTTTTA GCGCTTGTTT TCTAATTTCT	3060
GTAAAAAATG AAGAAAATAC TTCTAAAGAG CATGCGCTTG ATAAAAAGT TTTAGATCAT	3120
GCTTTCGGTC AAACATATAT AGATAAAAAA CCGAAGAG TTGCAACTAT TGCTTGGGGA	3180
AATCATGATG TAGCATTAGC TTTAGGAATA GTTCCTGTTG GATTTTCAA AGCAAAATTAC	3240
GGTGTAAGTG CTGATAAAG AGTTTACCA TGGACAGAAG AAAAAATCAA AGAACTAAAT	3300
GGTAAGCTA ACCTATTGTA CGATTGGAT GGACTTAAT TTGAAGCAAT ATCAAAATCT	3360
AAACCAGATG TTATCTTAGC AGGTTATCTT GGTATACTA AAGAAGATTA TGACACTCTA	3420
TCAAAAATTG CTCTGTAGC AGCATACAAA TCTG	3454

(2) INFORMATION FOR SEQ ID NO: 208:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 3752 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

CGGAGTATA CTTAATATA TTATAGTCTA AAATGACTA TCAGAAAAGA GGTAAATTTA	60
GATGAATAAG AAAAAAATGA TTTTAAACAAG TCTAGCCAGC GTCGCTATCT TAGGGGCTGG	120
TTTTGTACG TCTCAGCCTA CTTTGTAAAG AGCAGAAGAA TCTCCACAAG TTGTGAAAAA	180
ATCTTCATTA GAGAAGAAAT ATGAGGAAGC AAAAGCAAAA GCTGATACTG CCAAGAAAGA	240
TTACGAAAGC GCTAAAAGA AAGCAGAAGA CGTCAGAAA AAGTATGAAG ATGATCAGAA	300
GAGAACTGAG GAGAAAGCTC GAAAGAGAGC AGAAGCATCT CAAAATTTGA ATGATGTGCG	360
GCTTGTGTGT CAAATGCAT ATAAAGAGTA COGAGAAGTT CAAAATCAAC GTAGTAAATA	420
TAAATCTGAC GCTGAATATC AGAAAAAATT AACAGAGGTC GACTCTAAAA TAGAGAAGGC	480
TAGGAAGAG CAACAGGACT TGCAAAATAA ATTTAATGAA GTAAGAGCAG TTGTAGTTCC	540

		1196	
TGAACCAAT	GCGTTGGCTG	AGACTAAGAA	AAAAGCAGAA
AGTAGCTAAG	AGAAAATATG	ATTATGCAAC	TCTAAAGGTA
AGAGGCTAAG	GAACCTGAAA	TTGAAAACCT	TCAATATGAA
AGTTGCTACT	GCTCAACATC	AAGTAGATAA	TTTGAAAAAA
TGATGATGGC	ACAGAACTTA	TAGAAGCTAA	ATTAAAAAAA
TAAACAAGCT	GAGTTAGCAA	AAAAACAAC	AGAAGCTGAA
TCCTGAAGGT	AAGACTCAGG	ATGAATTAGA	TAAAGAAGCA
AAAAGCTGAT	GAACCTCAAA	ATAAAGTTGC	TGATTTAGAA
AATATTACTT	GGAGGGGCTG	ATCCTGAAGA	TGATACTGCT
TGCTAAAAAA	GCTGAGTTAG	CAAAAAAACA	AACAGAACTT
TGATCCTGAA	GCTAAGACTC	AGGATGAATT	AGATAAGAA
TAAAAAAGCT	GATGAACCTC	AAATAAAGT	TGCTGATTTA
TGAAATATTA	CTTGGAGGGG	CTGATTCTGA	AGATGATACT
AGCTACTAAA	AAAGCTGAAT	TGGAAAAAAC	TCAAAAAGAA
GTTAGGCCCT	GATGGAGATG	AAGAAAGAAC	TCCAGCGCCG
AGCTCCTGCA	CCAAAAACAG	AGCAACCAGC	TCCAGTCCA
TGCACCAAAA	CCAGAGCAAC	CAGCTCCAGC	TCCAAAACCA
AAAACCCAGG	CAACCAAGTA	AGCCGGAGAA	ACCAGCTGAA
ACCAGCCACT	CCAAAAACAG	GCTGGAAACA	AGAAAAACGGT
TGATGGTTCA	ATGGCAATAG	GTTGGCTCCA	AAACAACGGT
TAACGGCGCT	ATGGCAACAG	GTTGGGTGAA	AGATGGAGAT
ATCAGGTGCT	ATGAAAGCAA	GCCAAATGGT	CAAAGTATCA
CAGCAATGGC	GCTATGGCGA	CAGCTGGCT	CCAATACAAT
CGCTAATGGT	GATATGGCGA	CAGGATGGCT	CCAATACAAC
CGCTAATGGT	GATATGGCGA	CAGGATGGCT	TAAAGTCAAC
CGCTAACGGT	GCTATGGCTA	CAGGTTGGGC	TAAAGTCAAC
CGCTAACGGT	TCAATGGCAA	CAGGTTGGGT	GAAAGATGGA
AGCATCAGGT	GCTATGAAAG	CAAGCCAATG	GTTCAAAAGTA
CAATGGCTTA	GGTGGCCCTTG	CAGTCAACAC	AACTGTAGAT
TGGTGAAATGG	GTTTAAGCCG	ATTAAATTA	ATCATGTATA

600

660

720

780

840

900

960

1020

1080

1140

1200

1260

1320

1380

1440

1500

1560

1620

1680

1740

1800

1860

1920

1980

2040

2100

2160

2220

2280

2340

1197

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TTGAAACAAA GATAAGGTTG GATTGAATAG ATTATGTTTC GTATTCTTTA GTACCTATCT 2400
TTATGATTTC AGGAAATGTC ATTAATAAAA CGACTCATTT TCTCTAACCT GAAAAATAGA 2460
TTAGAGAAAA TGGGTTGTTT TATCTATTAT AGTTATTTGA ATGAAGATAA GAAGAAGGTA 2520
TACTCACATC ATTACATPAA TCTGTATATT GACTATAAGT TTTAAAAAAC AATTTTAAAG 2580
CTCTTCCTTG TCTTCTCTAA CCAAGCGTGT TATAATGAAT ACTGCTCAAG CGACCTCTAA 2640
TCGTGAAGCA CACACGACCT TCAATCGTGA ATAAACGAAT AGATGGGAGA CTTACCATGA 2700
GTGATAACTC TAAACACGCT GTTGTGTTGG GGATGATCGG TGGTGTTCAT TCGTCGGTGA 2760
CGGCTCTTTT GCTCAAGGAG CAGGCTACG ATGTGATCGG TATCTTCATG AAGAAGCTGG 2820
ATGACACAGA TGAAAACGGC GTCTGTACGG CGACCGAAGA TTACAAGGAT GTCGTTCGG 2880
TGGCAGACCA GATTGGCATT CCTTACTACT CTGTCAATTT TGAAAAAGAG TACTGGGACC 2940
GCGTTTTTGA GTATTTCTTA GCGGAATACC GTGCAGGCGC CACGCCAAT CCGGACGTTA 3000
TGTGCAACAA GGAATCAAG TTCAAGCCCT TTTTGGACTA TGCCATAACC TTGGGGGCG 3060
ACTATGTAGC GACTGGCAT TATGCTCGAG TGGCGCGTGA TGAAGATGTT ACCGTTTACA 3120
TGCTTCGTGG CGTGACAAAT GGCAGGATC AGACCTATTT CCTCAGCCAA CTTCGCAAG 3180
AACAACTTCA AAAAACCATG TTCCCACTAG GACATTTGGA AAAGCCTGAA GTACGCAGAC 3240
TAGCAGAAGA AGCAGGCCCT TCGACTGCTA AGAAGAAAGA CTCGACAGGG ATTGTCTTTA 3300
TCGGAGAAAA GAACTTTAAA AACTTTCTCA GCAACTACCT GCCAGCTCAG CCTGTGCGCA 3360
TGATCACTGT GGATGGTCGC GATATGGGCG AGCATGCAGG TCTTATGTAC TATACAATCG 3420
GTCAGCGTGG CGGACTCGGT ATCGGTGGGC AACACGCGCG TGACAATGCC CTTTGGTTGG 3480
TTGTGCGAAA AGATCTAAGC AAGAATATTC TCTATGTAGG ACAAGGATTC TACCATGATT 3540
CGCTCATGTC AACTAGCCTA GAAGCCAGTC AAGTCCACTT TACTCTGTAA ATGCCAGAG 3600
AGTTTACGCT AGAATGTACG GCTAAATTCG GTTACCGTCA GCCTGACTCT AAGGTGACCG 3660
TTCAATGCTAA AGGAGAAAAG ACAGAGGTCA TCTTTCCGGA ACCACAACGC CCGATTACAC 3720
CAGGACAGGC AGTGTGCTTT TACGATGGCG GG 3752

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(2) INFORMATION FOR SEQ ID NO: 209:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 3580 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear